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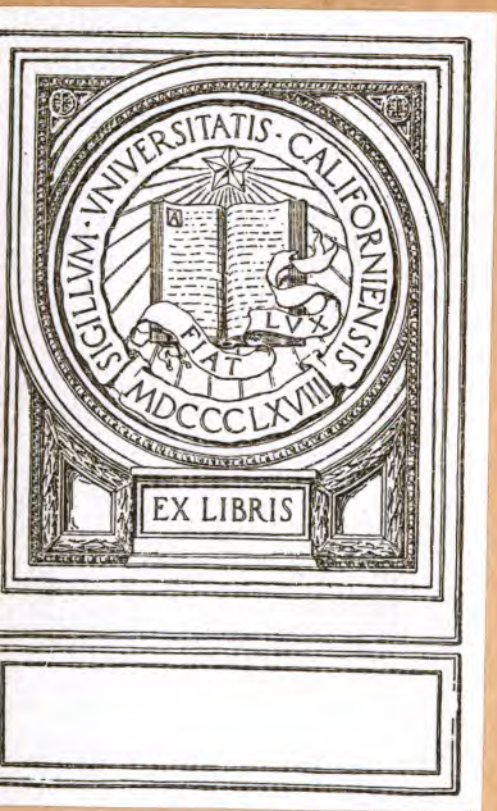
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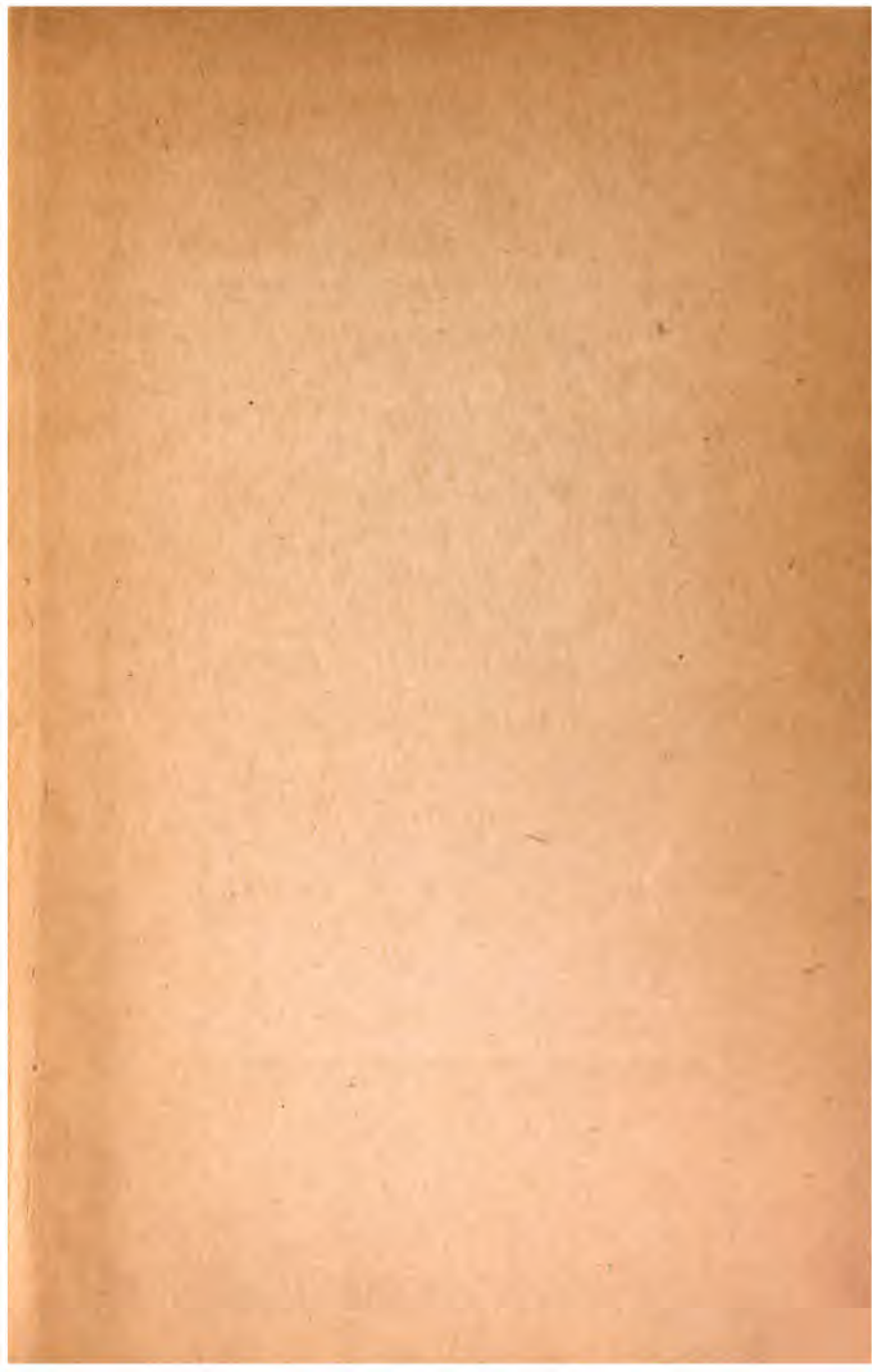
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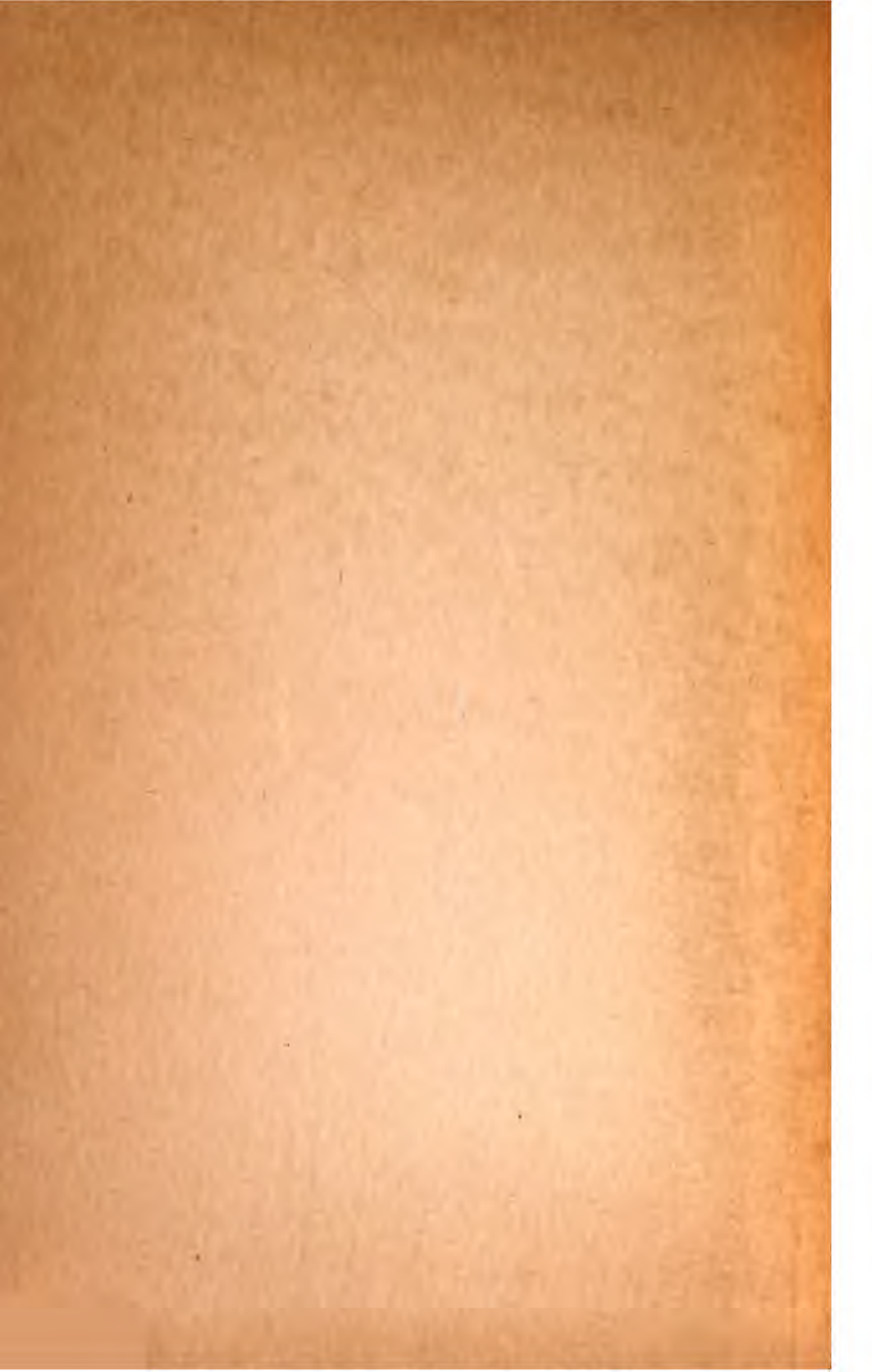
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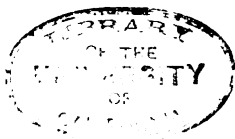


# HIGH SCHOOL ADMINISTRATION

BY

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**GENERAL**

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TO MY WIFE



## PREFACE

THE rapid development of the American high school has for some time pointed towards the need of a specialized treatment, in an organic way, of the general problems of its administration. The numerous normal school, college, and university courses offered on this subject point distinctly to a definite and growing interest in this field of discussion. If any further evidence were needed of the widespread interest in the high school as an institution, it might readily be found in the numerous organizations of the country whose discussions and efforts center wholly or quite specifically in the problems of secondary education.

One's experience as an inspector of schools also naturally adds emphasis to this call. The large number of beginners each year in the field of high school administration, with the consequent frequent inquiries for the things helpful in organizing the work, gives an insistence to the demand that can be neither mistaken nor ignored.

The title of "High School Administration" is used because the purpose has been to discuss the problems of secondary education as they are found to exist in the only distinctively American institution which undertakes to deal with them in a concrete way. It is, perhaps, needless to add that the greater part of the materials here presented have been developed in the laboratory of experience in various phases of public school administration, chiefly of high schools.

The general plan of presentation may be briefly stated as follows: The central feature is the discussion of the Program of Studies found in Chapter VII. It is here that the most important materials to be used in the educative process are to be found. The subjects for study form the central feature of the activities of the school. Here is the line of contact where the personality of the teacher meets that of the pupil in the learning process. To this the earlier chapters lead up or indicate the preparation of the means for carrying into effect the various courses of the program. The succeeding chapters deal with the

problems connected with the presentation of the program of studies, including some additional matters which the organization of the school for this purpose brings into the field of high school administration.

The assumption is that this is not an elementary treatise on management, but a presentation of the larger problems of administration for use in advanced courses in college or for the guidance of those who, though amateurs in the field of administrative work, may well be presumed to be familiar with the more elementary principles of school management.

By a similar assumption as to the division of effort, the aim of the author has been to confine psychological considerations within such limits as would meet the necessities of the case in making the presentation of all such relations clear.

If, at points, seemingly dogmatic statements are indulged in, the author must crave consideration on the ground that these usually come as a result of extended experience, and often in a field where such empiricism may be permitted to take the place of the present lack of sufficient data for a more scientific presentation.

In the third chapter, the general course of work in the elementary school as there defined has been put to the test by the author during four years of careful experiment in actual work under conditions unusually favorable.

The grateful acknowledgments of the author are due to President A. Ross Hill, of the University of Missouri, for very helpful suggestions; also to F. D. Haddock, formerly of Champaign, Illinois, now Assistant Commissioner of Education in Porto Rico; to Principal C. M. McConn, of the University Academy, and to Dr. E. L. Norton, Instructor in Education at the University of Illinois, for reading the manuscript while in process of revision and for the very suggestive criticisms offered by them. To Professor W. C. Bagley, of the Department of Education, who assisted in reading the proof, especial thanks are due for many helpful criticisms.

Further acknowledgments are due for the free use made of extracts from various reports and courses of study, especially in preparing the appendixes.

URBANA, ILLINOIS,

February 16, 1909.

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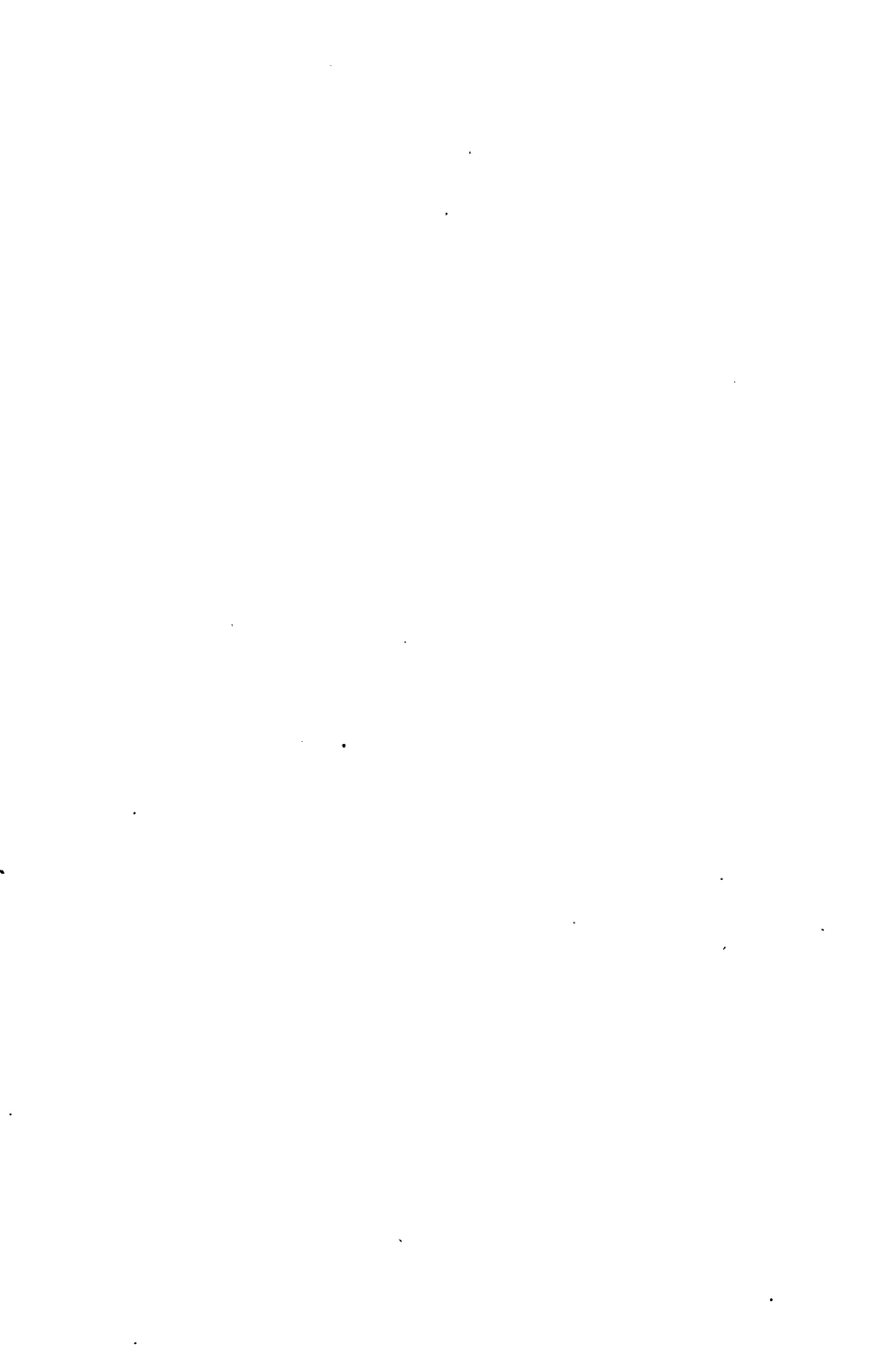
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# HIGH SCHOOL ADMINISTRATION

## CHAPTER I

### A BACKWARD LOOK

STRICTLY speaking, secondary education had its beginning in Europe after the time of the Roman Empire. It required a long time from the beginning of the formal instruction of youth before this period of education could be differentiated from other periods. Nevertheless, it is historically correct to say that the early types of secondary education are foreshadowed in the higher scholastic training of the Greeks and Romans.

#### I. EDUCATION OF GREEK AND ROMAN YOUTH

To the youths of Athens, at ages ranging from twelve to fourteen years, was offered the study of grammar, poetry, rhetoric, and music, along with a vigorous physical training. To these, after the fifth century, geometry, astronomy, and arithmetic were added. The work in grammar consisted chiefly of reading and writing of the grade now given in our elementary schools. Poetry and rhetoric were taught more as literature is now taught. The lyric and epic poems of Greece were committed and recited or sung. Much of the work classed under music consisted of the mastery of words and the rhetorical elements of the poetry to be recited. The mathematics and astronomy were at first of an elementary character,

and given chiefly for practical purposes. Later, the arithmetic became more abstract in the hands of the Greek philosophers.

The physical training of the youthful Athenian was a very important matter, and much time was given to the games, contests, and gymnastic exercises of the palæstra. The pupil was always accompanied by an instructor, whether in the pursuit of knowledge or when at his games and sports. The attainment of perfect manhood was the ideal constantly held up to him.

In Roman days, while conditions varied much from the time of the republic to the declining empire, the chief lines of instruction given were quite like those of the Greeks. The Roman curriculum included Greek as a foreign language, grammar, poetry, oratory, mathematics, with some history and philosophy. The physical training of the Roman youth was directed chiefly to the development of a good soldier. In fact, it may be said that the chief difference between Greek and Roman education lay in the ideals and purposes of the two races.

## II. THE MIDDLE AGES

When we pass beyond the empire to the Middle Ages in Europe, we find much the same materials of instruction in the schools for boys. The new element that appears in the monastic schools of this period is the emphasis placed upon religious training. This gives an entirely different trend and purpose to the work of the teacher, although the same secular subjects are taught, with the addition of the Latin language.

Later the growth of the free cities of Europe led to the establishment of an entirely new type of schools, secular in character. At first these were known as "reckoning

schools," organized primarily for the teaching of arithmetic such as was demanded by the growth of commerce, instead of the traditional and abstract form which had come down to the monastic schools from the philosophical treatment of the subject by the later Greeks. This same practical trend of the growing commercial life led also to the introduction into the city schools of the study of geography, history, the mother tongue, and even the rudiments of the natural sciences.

Contact with the Mohammedans in Arabia still further widened the field and led to the introduction of algebra, trigonometry, and the beginnings of chemistry into the now rapidly developing group of secondary subjects. The rise of the universities in the twelfth century added a great stimulus to the growth of a new scientific spirit which had been foreshadowed, if not, in a measure, promulgated in the teachings of Aristotle.

The notable result from these early periods of educational history, so far as this discussion is concerned, may readily be summed up in the fact that they furnish us with a starting place. In these early types we may see most of the essential elements, so far as subject-matter is concerned, which have constituted the curriculum of secondary education down to within very recent times. The tardiness which has always characterized the appearance of any important change in the subjects taught is indicative of the remarkable tenacity with which traditional forms persist, and speaks eloquently for the genuineness of these materials of education as corresponding to the deeper needs and interests of the human race. Even where the general purpose of education has undergone a complete change we have seen that the instruction of the schools, in its essential features, has remained practically

unchanged. Thus the pagan Greek, the religionist of the monastery, and the practical modern man have lived and thrived on an educational pabulum that was much the same.

### III. BEGINNINGS OF MODERN SECONDARY EDUCATION

The first important changes to appear looking clearly toward modern life seem to have been due to a recognition of the direct relationship of education to the common needs of life. These changes came as a result of an effort to adjust the training of such schools as we are here discussing to the necessities of a given environment. This tendency is particularly manifest in the introduction of the study of the mother tongue and of the natural sciences and geography. Such changes, mostly of a practical nature, came chiefly through the development of the city schools; but even there the Latin school continued to be the prevailing type.

The Renaissance, while it brought a revival of antiquity, also brought a strong tendency to shape the training of the schools more in accordance with the changed conditions and purposes of modern life. Combined with this was the influence of Aristotle<sup>1</sup> who passed on to the moderns, through the revival of Greek learning, the fundamental idea of making nature and man the basis for the discovery of truth. In the reorganization of the educational systems of Europe at this time the *Gymnasium* appeared, chiefly as a school preparatory to the work of the universities. The coming of the Reformation, with the influence of Luther and Melancthon, greatly modified the work of this school. Luther believed strongly in the training of boys and girls to some manual vocation as well as in the studies of the schools. It was through the

<sup>1</sup> Cf. Monroe, pp. 159 and 355; also Davidson, "Aristotle," p. 162.

influence of Melanchthon, especially, that the schools were secularized and organized into some semblance of a system.

#### IV. LATER DEVELOPMENT OF SECONDARY SCHOOLS IN EUROPE

The German *Gymnasium* is the typical secondary school of early modern Europe. The program of studies, at the time of the first organization of this type of school in the sixteenth century, consisted of Latin, Greek, Hebrew, and mathematics, with a study of rhetoric and dialectic in connection with Latin.

Toward the close of the seventeenth century there arose another influence which greatly modified the existing educational system, and marked the real beginning of our modern conception of school training. Bacon, in England, and Descartes and Leibnitz, in Holland and Germany, were leaders in the advocacy of the scientific method, a conception of the educational process which they had inherited from that modern among the Greeks, Aristotle. (Cf. Davidson.) Through their influence this new conception of educational philosophy found its way into the educational systems of Europe. This was at first a movement entirely outside of the universities which still stood for the earlier monastic types of education. Comenius, who was a close student of the scientific movement, became one of the prime movers in organizing the secondary schools of Europe in accordance with the new inductive system of study. It was through him chiefly that the work of the *Gymnasium* was completely organized.<sup>1</sup>

The realism of Francke was also a factor in introducing modern educational elements into the secondary schools

<sup>1</sup> Cf. Compayré, "History of Pedagogy" (Payne), p. 122 and f.

of Germany. An important result of his teaching was the organization in the eighteenth century of the *Realschule*, the courses in the early types of which included instruction in religion and ethics, German, French, and Latin languages, writing, arithmetic, drawing, history, geography, and the elements of geometry, mechanics, and architecture. The reckoning school<sup>1</sup> of the free cities may be said to have been the prototype of the *Realschule*, and doubtless also of the modern type of trade school characteristic of the German system. Other conditions, as far as secondary education is concerned, seem to have remained comparatively at a standstill during the eighteenth century, with, possibly, a retrogression toward ecclesiastical domination and the emphasis of the humanities. At the same time in the universities the way was being prepared for the great changes which were to follow.

The Napoleonic wars, and the arousing of a national spirit among the German states, resulted not only in laying the foundations for the empire, but also brought with this a complete reconstruction of educational policy.<sup>2</sup> Under the leadership of Humboldt and Wolf the universities were reformed, teaching was put on a professional basis, and German secondary schools were reorganized on a much broader plan than ever before. The influence of Fichte is also notable in this connection. The real significance of this change, so far as the program of studies is concerned, will become apparent by comparing the earlier programs given above with those of the present. (See Appendix A.)

Other changes no less notable in the German secondary schools occurred under the great national movement follow-

<sup>1</sup> See Jackson, "Educational Significance of Sixteenth Century Arithmetic," p. 170 and f.

<sup>2</sup> Cf. Russell, "German Higher Schools," Chapter IV.

ing the victorious war with France. First among these is the change in the character of the teaching. Under religious domination those placed in charge of these schools were often very poorly fitted for their tasks, even if they had been deeply interested in their work as teachers. As a matter of fact they seem to have been most frequently young men who were preparing for the priesthood, to whom teaching positions were given in order to afford them a means of support while they were undergoing their preparation for religious ministration.

One of the first things accomplished by Humboldt was to make provision for properly trained teachers for these schools. From this time only those having a university training, supplemented by some professional training and experience, were to receive permanent appointments as teachers in the secondary schools. As a result, there is probably no system of secondary schools in the world that can compare with that of the German states in the thorough efficiency and soundness of its teaching. Then, too, we may well imagine what a transformation came later to the spirit of these schools by the act which made them the direct instruments toward maintaining a great militant empire, instead of being merely a part of the peaceful ministration of the church. The seriousness of purpose, the realization that this training was for the preservation of an empire, naturally made the matter of discipline quite a different consideration from anything which had previously existed in the schools of the Western world.

French popular education dates from the days of the Revolution; and French secondary schools in the form of the *lycée* and communal colleges were a part of Napoleon's plan for the organization of a great state system of education. Naturally enough, under the ecclesiastical

domination of educational interests throughout Europe, these schools were, from the first, shaped, as to the instruction offered, by the dictation of the church. Not until 1882 were the public *lycées* secularized. This was a great step, but still the Jesuit schools were maintained side by side with the *lycée* and communal colleges. The system of moral training introduced as a substitute for the religious instruction which had characterized the schools while under control of the church was subjected to the severest criticism by the churchmen. The students of the church schools were allowed to enter the examinations for the baccalaureate and for the government service at the close of the course along with the successful students of the public institutions.

Like the German schools, the form of discipline was severe,<sup>1</sup> although from causes somewhat different. Here, instead of the burden of empire, was the possible failure in securing a government appointment, and also the prospect of a return to complete church domination through the superior strength of the private church schools. The work was too heavy in proportion to the brief time given to relaxation, and that, too, with an utter absence of games and vigorous sports. In this latter respect the church schools were superior.

The program of studies has until recently been that of the strongly classical type. In 1902 a new plan was adopted by which a choice of different groups is offered. These groups are, briefly, as follows: —

Group A, based on Latin and Greek;

Group B, an association of classics and modern language;

Group C offers little Latin, some modern language, and much physical and mathematical science;

<sup>1</sup> Cf. Hughes, "The Making of Citizens," p. 215, also p. 222 and f.

Group D is an association of science and the living languages.  
(For the study programs of the *lycées* see Appendix A.)

Under more recent reform movements the state has assumed control of the teaching in all secondary schools. The teaching in the French secondary schools seems always to have been of a high order of its kind, although not so high as that of Germany. One cannot study the system as it existed throughout the nineteenth century without finding oneself rather in sympathy with Ribot, Demolins, Guyau, and other French critics of their own national schools, who undoubtedly did much to help on the reform movement of the present.

In England we find a marked influence upon education arising out of the Reformation. The first notable type of secondary school is the one outlined by Milton in the, "Tractate." His proposed program of studies is as follows:

- Latin — grammar, Quintilian, Cato, Varro, Columella ;
- Greek — grammar, writers on historical philosophy ;
- Greek and Latin literature with logic, rhetoric, and poetics ;
- Mathematics — carried into trigonometry, with applications to fortifications, architecture, engineering, navigation ;
- Astronomy, geography, and natural philosophy ;
- Ethics, economics, politics ;
- Much physical exercise with care as to diet. Music.

Milton believed there should be but little study in the spring, but, rather, contact with nature afield. Thus we find him, like Luther, to have had a rather clear conception of the significance and tendencies of the scientific spirit.

Milton's plan for an academy was not realized at the time ; but it is evident to us now that its influence has been effective, along with other things, in producing the modern conception of secondary education among English-speaking

people. As an actual type of seventeenth-century English academy, however, we may note that of John Woodhouse,<sup>1</sup> located at Sheriffhales in Shropshire. The program of this school included lectures on logic, anatomy, mathematics, natural philosophy, ethics, and rhetoric, and the study of Latin, Greek, Hebrew, and English composition. Thus we find again the type of school corresponding to its contemporaries in Germany, — the regular Latin school.

The secondary schools of England are as distinctly Anglo-Saxon as are those of France characteristic of the French people. Their existence is best expressed, perhaps, by the term "voluntary." If they lack in completeness of organization, the fact is to be attributed more to an instinctive distrust of interference by the state than to any failure to appreciate the value and necessity of such schools. "The most characteristic feature of the English School," says R. E. Hughes, "is its great diversity." There have developed as many as five different classes of secondary schools, each class in turn representing different varieties. The five classes are those controlled (1) by private enterprise, (2) by subscribers, (3) by companies, (4) by endowment of one form or another, (5) by local authority. (Cf. Hughes, p. 299.)

All these types of secondary schools are very much alike as to the program of studies, the central feature of which is found in the classic languages. One other notable characteristic is the provision for plays as a part of the regular program, — games of many kinds in which all who are not actually disabled physically must participate. It is this out-of-doors habit in English education which attracted the attention of M. Demolins when comparing the English with the French system. It was chiefly to

<sup>1</sup> See E. E. Brown, "Making of the Middle Schools," p. 163.

this feature that he was pleased to attribute Anglo-Saxon superiority as compared with the men of his own country.<sup>1</sup>

The persistent union of church and state seems to have kept the schools of England longer under church control than is consistent with the provision of a more liberal modern curriculum. As it is, the sciences, mathematics, and even modern languages are only tolerated, and the great English literary classics are neglected for the study of those of Greece and Rome. The realization of the national interest in education seems to have dawned later upon the minds of the English people than of other Germanic races. But recent developments in the government schools of England show conclusively that the awakening has come, and that henceforth the schools will be administered more in the interests of national needs.

## V. EARLY SECONDARY SCHOOLS IN AMERICA

This review of the development of European secondary schools, while interesting in itself, is of especial importance to us because of the influence these schools have had and are still exerting upon the development of secondary education in this country. The secondary types established in Germany, England, and France were early transferred to the American colonies. Of these the influence of the English schools seems to predominate, although evidences are not lacking of very distinct influences traceable to the French and German types. The Pilgrims in New England, the Quakers in Pennsylvania, and the Dutch in New York brought with them lofty conceptions of education and of the kind of schools the colonists should maintain. It was William Penn who said: "That which makes a

<sup>1</sup> "Anglo-Saxon Superiority," by Edmond Demolins, translated by Lavigne.

good constitution must keep it, namely, men of wisdom and virtue, qualities that because they descend not with worldly inheritance must be carefully propagated by a virtuous education of youth, for which spare no cost, for by such parsimony all that is saved is lost." In Brodhead's "History of the State of New York" we find a fair expression of the educational ideals of the Dutch in the following: "Neither the perils of war, nor the busy pursuit of gain, nor the excitement of political strife, ever caused the Dutch to neglect the duty of educating their offspring to enjoy that freedom for which their fathers fought. Schools were everywhere provided, at the public expense, with good schoolmasters, to instruct the children of all classes in the usual branches of education."

The people of Massachusetts have summed up in their constitution, in the following language as set down by John Adams, that lofty conception which the Pilgrims sustained in regard to education as a public duty. "Wisdom and knowledge as well as virtue, diffused generally among the body of the people, being necessary for the preservation of their rights and liberties, and as these depend on spreading the opportunities and advantages of education in the various parts of the country, and among the different orders of the people, it shall be the duty of legislatures and magistrates, in all future periods of the Commonwealth, to cherish the interests of literature and the sciences and all seminaries of them, especially the university at Cambridge, public schools, and grammar schools in the towns; to encourage private societies and public institutions, by rewards and immunities, for the promotion of agriculture, arts, science, commerce, trades, manufactures, and a national history of the country; to countenance and inculcate the principles of humanity and general benevolence, public

and private charity, industry and frugality, honesty and punctuality in all their dealings; sincerity and humor, and all social affections and generous sentiments among the people."

With the development of such educational sentiment as is thus expressed among the early colonists it is not surprising that a high type of secondary training early made its appearance in America. As early as 1743 we find the announcement of Franklin's plan for an academy.<sup>1</sup> According to his plan all were to be taught penmanship, drawing (with perspective), arithmetic (with accounts and the first principles of geometry and astronomy), and the English language (grammar, oral reading, and composition). Great stress was laid on the teaching of English. Readings in history were made to constitute the vital center of the whole plan of instruction. Around this were to be arranged geography, chronology, ancient customs, oratory, civil government, logic, languages, morality, and religion. There were also to be readings in natural history, with practical exercises in agriculture and horticulture. Commerce, industry, and mechanics were to be included in the program. The languages to be studied were Latin, Greek, German, French, Spanish. The choice of language was made to depend on the preparation sought. Although Franklin is said to have been influenced by Defoe, his conception of an academy bears marks of that originality characteristic of all that he did. The fact that the educational interests of Philadelphia to-day, both public and private, have peculiar qualities which distinguish them from all other American cities is doubtless due to the influence of Penn and Franklin. One is not surprised, for instance, to find in the Philadelphia of to-day a Drexel Institute, a

<sup>1</sup> See E. E. Brown, "Making of the Middle Schools," p. 180.

School of Industrial Arts, and various manual training schools, to say nothing of a day school of trades, of high school grade, for boys,—the first of its kind in America.

In 1751 an academy was opened in Philadelphia. It was organized in three schools of Latin, English, and mathematics, each under a separate master. The Moravian academy of Nazareth Hall was also founded in Pennsylvania in 1755-1756. The subjects taught in this academy were, besides elementary branches, English, German, Latin, French, and Greek languages, history, geography, mathematics, music, drawing. The Moravian influence is of interest here as marking the early transfer to America of the educational ideals of Comenius, an influence which was also felt through the use of his text-books, especially at Cambridge and in Boston.

One of the most notable American academies, and one which we may study to some advantage in its evolution from an early to a modern type of private secondary school is Phillips Academy, at Andover, founded in 1778. As first established it was to teach: First, piety and virtue; second, English, Latin, and Greek languages, together with writing, arithmetic, music, and the art of speaking; third, practical geometry, logic, geography; fourth, other liberal arts and sciences or languages, as opportunity and ability might admit. A little over a century later we find it offering two full programs of study, one English and the other classical. (See Appendix B.) Numerous other private secondary schools developed at an early day in our history. These were, for the most part, college preparatory schools, and so remain at the present time. To this type belong Phillips Academy and also Phillips Exeter, founded three years later at Exeter, New Hampshire. These institutions

are distinctively English in type and preserve to the present time features in their organization characteristic of English secondary schools.

Other less notable academies offered general instruction to such as might apply, either for a few months or as a continuous course. They were generally very flexible as to courses taught, adapting their offerings to the needs of such students as sought this much of higher training or preparation for college. These academies may be said to have originated the practice of the elective system<sup>1</sup> in American secondary schools.

## VI. EVOLUTION OF THE PUBLIC HIGH SCHOOL

We come now to a consideration of secondary education as a part of the public school system of the United States. In selecting the following types the aim has been to include such school systems as will best present the leading influences that have been operative in the development of our high schools. The first secondary schools of a public nature were known as grammar schools after their English prototype. These were schools of the Latin type, and were organized chiefly as college preparatory schools. As we shall see in a later chapter,<sup>2</sup> these schools were established generally throughout the colonies, and especially in New England. Early in the nineteenth century we find some dissatisfaction developing with regard to the program of studies offered by the grammar schools. In Boston this feeling found expression in the appointment of a special committee to draft plans for a new type of secondary school. The need of such a school is set forth in the following words: "The mode of education now

<sup>1</sup> The subject of electives will be found more fully discussed in Chapter VII.

<sup>2</sup> Cf. Chapter II.

adopted, and the branches of knowledge that are taught at our English Grammar school, are not sufficiently extensive nor otherwise calculated to bring the powers of the mind into operation nor to qualify a youth to fill usefully and respectably many of those stations, both public and private, in which he may be placed."<sup>1</sup>

As a result there was organized in 1821 the Boston English Classical School, afterward known as the English High School. The first program of studies proposed for this school, which was exclusively for boys, was as follows:<sup>2</sup> —

*First Class.* — Composition, reading from the most approved authors, exercises in criticism, composing a critical analysis of the language, grammar, and style of the best English authors, their errors and beauties, declamation, geography, arithmetic continued.

*Second Class.* — Composition, reading, exercises in criticism, declamation, algebra, ancient and modern history and chronology, logic, geometry, plane trigonometry, and its application to mensuration of heights and distances, navigation, surveying, mensuration of surfaces and solids, forensic discussions.

*Third Class.* — Composition, exercises in criticism, declamation, mathematics, logic, history, particularly that of the United States, natural philosophy, including astronomy, moral and political philosophy.

Here we find the first school of the *Realschule* type in America.

In the report of the examiners of the English High School for 1850, of which body S. K. Lothrop was chairman, the following recommendation appears: —

"Intellectual philosophy, political economy, and the Spanish language, ought to be introduced as a part of the course. The last two branches are of direct importance to every business man in this country, and the first should form a part of any system of general intellectual and moral culture."

<sup>1</sup> Quoted from school committee's report to the Boston town meeting. See Brown, p. 299.

<sup>2</sup> Cf. Brown, pp. 300-301.

Again in the report of the examining committee for 1856 occurs the following comment with reference to the First, or graduating, class of the high school:—

“In Astronomy, particularly nautical Astronomy, in Natural Philosophy, particularly in the department of mechanic powers and hydraulics, in the French language, and in some portions of Moral Philosophy and the Evidences of Christianity, there was a singular degree of uniform correctness exhibited.”

In 1858<sup>1</sup> the studies of the First (highest) class were enumerated as follows: Trigonometry, and its application to surveying, navigation, mensuration, etc., astronomy, natural philosophy, moral philosophy, political economy, natural theology, Christian evidences, English literature, and the French language. The examinations upon these subjects occupied two whole days.

Thus we are enabled to catch glimpses of the forces which were operative in developing this first high school in America, and, consequently, of the tendencies of our earlier secondary public education. (For later programs of the Boston high schools, see Appendix B.)

A study of some of the later programs of this school shows that a much broader conception of secondary training has developed since its first organization. Not only is there a considerable degree of choice provided for, but we find Latin reappearing as one of the optional languages. Commercial work finds some recognition, and the natural science work takes on a distinctly modern character. The organization of a Girls' High School followed, but not until some time after that of the English High School for Boys. Cooking was introduced into the program of this school in 1885.

In 1893 the Mechanic Arts School was opened. The

<sup>1</sup> See Boston Report for 1858.

following quotation from the report of Principal C. W. Parmenter in 1895 is significant as plainly setting forth what was then considered as the function of such a school in distinction from a regular trade school: "The important distinction between trade schools and manual training high schools cannot be too strongly emphasized, for these two classes of institutions are likely to be confused in the public mind. It is the function of a trade school to teach thoroughly any one of many trades as rapidly as the student's ability will permit. No instruction is given that does not bear directly upon the chosen trade. Obviously, the choice of occupation must be made on entering the school. If experience demonstrates that the choice is unfortunate, a change necessarily involves considerable loss of time. If a boy begins to learn the carpenter's trade and discovers, after a time, that he has special aptitude for sign painting, the time spent at the bench will not shorten the period required to acquire skill with the brush. But the conditions of modern industrial life demand the establishment of trade schools as a substitute for the apprentice system, which is rapidly becoming obsolete. They are a priceless boon to ambitious boys in the vast army whose general education must end with the grammar school, for they offer an opportunity to secure quickly a place in the ranks of skilled workmen. Nevertheless, the functions of a trade school are strictly special; general education does not fall within its scope.

"The manual training school, on the contrary, teaches the elements of mechanic arts primarily on account of their educational value, just as arithmetic and geometry are taught. But the manual dexterity and the knowledge of tools, materials, drafting, and methods of construction acquired at school serve to advance boys many stages

toward the mastery of any trade. Moreover, their elementary but systematic knowledge of the entire field of mechanic arts gives them the same advantage in dealing with the difficult problems of any trade that a liberal education gives to the student of law or medicine."

It may be noted here that the above characterization of a manual training high school has been repeated in schools of a like nature organized in both the East and the West. Among these are the manual training schools of New York, Brookline, Chicago, St. Louis, Kansas City, and Indianapolis. Boston also now includes in her secondary group a high school of commerce for boys, a high school of practical arts for girls, and several regular mixed high schools similar to those of the West.

Summing up the record of Boston's secondary schools, we find first the type of the *Gymnasium* of the corresponding period as illustrated in the grammar school and Latin school. Then follows the English High School representing the *Realschule* type. Later, as the number of schools increased, and as a more liberal view of secondary education developed, we find the English High School returning to the classics through the elective system. At the same time we find the more specialized type of training making its appearance in the cooking department of the Girls' School, and a little later in the organization of the manual arts schools above mentioned. At the present time Massachusetts is among the leaders in a movement for the establishment of trade schools of a secondary grade.

The early secondary work of New York was in her academies. In 1784 the Board of Regents of the University of New York was provided for by statute. This Board of Regents was put in control of all the public educational interests of the state, and of such private interests, to a cer-

tain extent, as might be willing to work under their rules. In November, 1787, two schools, Erasmus Hall and Clinton Academy, were duly incorporated as secondary schools under the supervision of the Regents.<sup>1</sup> These, with Columbia College, constituted the first three institutions of the University. In 1788 the two academies mentioned enrolled 26 and 53 students, respectively. According to the report for the same year it appears that Erasmus Hall agreed to maintain two departments; the first to comprise the Latin and Greek languages, with geography and the outlines of ancient and modern history; the second, the English language, reading, writing, arithmetic, and bookkeeping. It was also agreed that the French language should be taught to those that requested it, and that elocution should be given in both departments.

In the case of Clinton Academy it seems that the first class had 12 scholars in the Latin and Greek languages, logic, natural philosophy, mathematics, and geography; and that the second class had 17 in English grammar, writing, arithmetic, and accountantship, and that such as desired it were taught the French language.

At the same meeting there were authorized two courses of study: (1) a course for students preparing for college, and (2) a course adapted to the needs of those whose education ends with the secondary school. Since that time the Regents have exercised control over the program of studies for all schools. They have defined the limits of elementary and secondary education, and have prepared syllabuses covering all subjects taught. Throughout they have sought criticism and suggestions from teachers and principals as, in part, the basis for revision from time to time.

<sup>1</sup> See Bulletin 27, 1905, New York State Education Department, pp. 3-4.

The coming of the high school is a late event in the city of New York. This occurred in 1897.<sup>1</sup> Now there are in New York City several great high schools of different types, such as the De Witt Clinton High School for Boys, the Wadleigh High School for Girls, the High School of Commerce, the Morris (coeducational) High School of the Bronx, the new Stuyvesant manual training high school, and the various Brooklyn high schools.

While the forward movement may fairly be characterized as conservative, yet it has brought the secondary schools of New York well forward among progressive schools of their kind. From two academies in 1787 the number of secondary schools in the state has increased to 799. The list of subjects included in the Academic Syllabus of 1905 is fairly indicative of the progress made as well as the scope of the work now included in the programs of those schools. (See Appendix C.)

Thus we see in the case of New York a development which is entirely unique so far as American schools are concerned. In the conception of a university which it embodies it is strikingly like the French system. From the very inception of the system under our existence as a nation the schools of this great commonwealth have moved forward in one closely coördinated group of educational interests. In their present form the secondary schools embody practically every phase of secondary activity now considered as belonging to the machinery of this stage of the educative process.

Another high school system which shows very clearly the stages in the evolutionary process through which this part of our educational system has passed, is that of St. Louis. A further reason for taking this city as a typical case is the fact that its high schools have had a unique

<sup>1</sup> A high school was organized in 1825 but suspended in 1831.

development among Western schools. The first St. Louis high school was organized in 1853, and the next year a building was erected for high school purposes. In 1856 the following rule was promulgated for this school:—

“Rule 63.<sup>1</sup>—The studies of the High School shall constitute a *General* and *Classical* course. The *Classical* course (as at present arranged) shall occupy four years, and shall include the studies required for admission to the best American colleges; and may be continued by longer attendance, through all the studies requisite for a good classical education.

“The *General* course shall occupy four years, and shall embrace the mathematics and drawing necessary for an accomplished engineer; the Latin language, so far as possible and desirable for general culture, for more thorough acquaintance with general grammar and with our own language, and to facilitate the acquisition of modern language; the reading and speaking of German and French; and such studies in science and literature as shall best fit pupils for different departments of business, and make them generally intelligent.”

Here we have that conception of a high school which, in Jefferson's scheme for education, would have been the local higher institution covering not only secondary but collegiate work, if the conditions demanded. The community itself should fix the upper limit, if any was to be placed, to the program of studies which this school might offer. Further, in the language of the last clause, we find expressed that conception of the elective system which seems to have been logically carried out in the later development of St. Louis high schools.

In 1863 we find the program of studies more definitely outlined, and a choice given between two courses, copies of which are given in Appendix D. It will be found interesting to compare these courses with Milton's proposed course

<sup>1</sup> See St. Louis Report for 1856.

for an academy, with the courses of the German *Gymnasium* and *Realschule*, and the French *lycée*, and with that of the first English high school of Boston.

These courses remained in force until Dr. William T. Harris became superintendent. His second report<sup>1</sup> discusses fully the college requirements for entrance and the general scope and needs of high school work. In succeeding reports he discusses at length the high school course, analyzing it into its elements and discussing each with reference to its purpose in the process of educating youth. This discussion is among the earliest marking the advocacy of a psychological basis for the determination of the content of the curriculum of high schools. In 1874-1875 a somewhat radical change of program was introduced as a result of the influence of Dr. Harris. (See Appendix D.) The changes thus brought about mark all the difference, practically, between a heavy, traditional program including much of what is now really college work, and a modern, well-balanced high school program. (For later programs of these same schools see Appendix D.)

The more recent development of high school interests in St. Louis still leaves a strong central school with a broadly elective general program, and along with this two excellent manual training high schools. These latter schools are not of the trade-school type, as may be seen by an examination of the very liberal courses which they offer. It is the present policy of this school system to maintain the organic unity of secondary work. To this end both manual arts and commercial courses will be provided in all the high schools of the city. To-day the high schools of St. Louis offer, in all, nine distinct programs, as follows: scientific, classical, general, art, college classi-

<sup>1</sup> See St. Louis Report for 1868.

cal, college scientific, commercial, manual training, and a course preparatory to teachers' college.

It is a fact worthy of consideration here that the newer schools of the West were for the most part free from much of the traditional Old World influence which dominated most of the earlier Eastern secondary schools, and which, curiously enough, we see prevailing also in the earlier stages of development of the St. Louis high school. Rightly speaking, indeed, we may say that the Middle West is the real first home of the typical American high school. In Chicago, for instance, the first high school was organized in 1856. As early as 1866<sup>1</sup> we find the program of studies for this high school to be:—

#### GENERAL DEPARTMENT

- 1st year.* Algebra.  
German or Latin.  
Physical Geography  $\frac{1}{2}$ ; Physiology  $\frac{1}{2}$ .
- 2d year.* Geometry.  
German or Latin.  
Universal History  $\frac{1}{2}$ ; Botany  $\frac{1}{2}$ .
- 3d year.* Trigonometry and Surveying  $\frac{1}{2}$ ; Astronomy  $\frac{1}{2}$ .  
German or Latin or French.  
Natural Philosophy.  
Rhetoric  $\frac{1}{2}$ ; English Literature  $\frac{1}{2}$ .
- 4th year.* Chemistry  $\frac{1}{2}$ ; Geology  $\frac{1}{2}$ .  
German or Latin or French.  
Intellectual Philosophy  $\frac{1}{2}$ ; Bookkeeping  $\frac{1}{2}$ .  
Constitution of United States  $\frac{1}{2}$ ; Political Economy  $\frac{1}{2}$ .

#### CLASSICAL DEPARTMENT

- 1st year.* Algebra.  
Latin.  
Physical Geography  $\frac{1}{2}$ ; Physiology  $\frac{1}{2}$ .

<sup>1</sup> See Chicago Report for 1866.

*2d year.* Geometry.

Latin.

Universal History.

Greek, last  $\frac{1}{2}$  year.

*3d year.* Greek.

Latin.

Natural Philosophy  $\frac{1}{2}$ ; English Literature  $\frac{1}{2}$ .

*4th year.* Greek.

Latin, including Prose Composition.

(See Appendix E for recent programs.)

In all their subsequent development the program of studies for the Chicago schools has been on a broad modern basis, although in the development of the later types of industrial education there seems to be a distinct tendency to revert to the Eastern plan of segregating these from the general high school type. What is true of Chicago in respect to the evolution of secondary training in general is also true of most of the important minor cities of the Middle West and the Pacific coast. This statement does not apply, however, in the case of industrial education.

Along with the changes which have occurred in the program of studies since the first organization of secondary schools in this country are to be noted important changes in methods and in discipline. In these changes the schools of the Middle West have also taken the lead. It is to them that is to be attributed the chief influence which has brought into general use the laboratory method in science, and the more general application of the scientific method in teaching. From the severe methods of discipline inherited from England and other European schools the high schools of the Middle West have led us into the adoption of that peculiar democratic type of high school discipline which is the crowning glory of the American educational system.



We have seen in this brief historical review and comparative study the lines of influence which have come to our high schools from the corresponding schools of Europe. We may also note some features which are distinctively American. Among the most important of these is, first of all, the fact that our schools are established and maintained, at public cost, for the masses. They are supported by local taxation and their government is by local authorities. They are characteristically coeducational except in those sections where European types have dominated from the first. Even in these sections the later tendency is to coeducational schools. Thus far the prevailing practice has been to preserve the organic unity of high schools rather than to segregate them into general and industrial types. Instead of such segregation the elective system is in vogue, thus making diversity of curriculum possible along with organic unity.

#### PROBLEMS SUGGESTED FOR FURTHER INVESTIGATION

1. The growth of schools in the free cities of mediæval Europe and their influence on modern secondary schools.
2. The early scientific movement and its effect on secondary education.
3. The educational teachings of Comenius and Francke as affecting secondary schools.
4. Humboldt's policy concerning secondary education.
5. The influence of Christianity upon the early development of secondary education.
6. Napoleon's scheme for national education and the place of the secondary school in it.
7. Old World traditions as affecting secondary education in the United States.
8. The "grammar schools" of colonial days and later.

**References.**—"Text-book in the History of Education," Monroe; "Historical Survey of Pre-Christian Education," Laurie; "Aristotle and the Ancient

Educational Ideals," also "Education of the Greek People," Davidson; "Old Greek Education," Mahaffy; "History of Pedagogy," Parker; "Study of the Prototypes of the Modern Non-Professional School among the Greeks and Romans," Anderson; *Ped. Sem.* 14:1-38; "History of Education," Painter; "History of Ancient and Modern Education," Williams; "Educational Significance of Sixteenth Century Arithmetic," Jackson; "Christian Schools and Scholars," Drane; "A Study of Mediæval Schools and School Work," Anderson; *Ped. Sem.* 14:223-282; "Educational Reformers," Quick; "Humanism in Education," Jebb; "The Great Didactic," "Orbis Pictus," Comenius; "Tractate on Education," Milton; "Comenius," also "Milton's Theory of Education" (in "Essays and Addresses"), Laurie; "Education in the Nineteenth Century," Roberts; "National Education in the German States," Barnard; "Educational Foundations of Trade and Industry," Ware; "Systems of Education," Gill; "English Education," Sharpless; "Making of Citizens," Hughes, R. E.; "English National Education," Holman; "The Educational Systems of Great Britain and Ireland," Balfour; "German Higher Schools," Russell; "A General View of the History and Organization of Public Education in the German Empire," W. Lexis (tr. by Tamson); U. S. Commissioner of Education, Report of 1899-1900, Vol. I., pp. 828-843, article on "Secondary Education in Germany"; "A French Eton," Arnold; U. S. Commissioner's Report, 1905, Vol. I., article on "Education in France"; "Our Colonial Curriculum," Meriwether; "Education in the United States," Boone; "History of Education in the United States," Dexter; "Making of the Middle Schools," Brown; "The New York Public Schools," Palmer; Regent's Reports, University of New York; Bulletin 27, "Secondary Education," New York State Education Department; Reports of Boston, St. Louis, Chicago, Kansas City; "The Central High School of Philadelphia," Edmonds.

## CHAPTER II

### LEGAL STATUS OF HIGH SCHOOLS

A PEOPLE's estimate of the value of an institution is often expressed in the laws they make. It is probably true of education, for instance, that the laws concerning the schools of the masses are the highest expression on the part of their leaders as to the training of the young in which the masses are able to acquiesce. School laws are certainly the basis for all school administration. No discussion having to do with the administration of secondary schools, therefore, would be complete without some inquiry as to the legislation which stands back of such administration.

#### I. LEGAL ENACTMENTS FOR COLONIAL SCHOOLS

For the beginning of this legal status in America we are not left in doubt. We must go directly to the history of the colonies.<sup>1</sup> We find that as early as November, 1647, by a decree of the General Court, the colonists of Massachusetts set a legalized approval on secondary education. This decree reads as follows: "And it is forthwith ordered that where any town shall increase to the number of one hundred families or householders, they shall set up a grammar school, the master thereof being able to instruct youth so far as they may be fitted for the university, pro-

<sup>1</sup> For the facts referring to colonial legislation on schools given in the next few pages the author is largely indebted to Clews, "Educational Legislation and Administration of the Colonial Governments."

vided, that if any town neglect that performance hereof above one year, that every such town shall pay five pounds to the next school till they shall perform the order."

There is surely no uncertain note about this. The act goes directly and vigorously to the accomplishment of a desired purpose. Similar acts were put in force by Connecticut and New Hampshire. Rhode Island, a little more democratically inclined, perhaps, by the nature of her foundation, intrusted to town governments and to charitable persons and corporations the prerogative of making provision for secondary education.

In the province of New Amsterdam, through the coöperation of the town and the West India Company, a grammar school was first opened in 1659. This course was confirmed later under British possession, and in 1702 the General Assembly of the province of New York passed an act establishing a grammar free school in the city of New York. The nature of this school, as well as the custom then in force as to licensing of teachers, is well expressed by the following document issued by the governor to the first teacher under the new act:—

"TO MR. GEORGE MUIRSON, GREETING:

"I do hereby authorize and impower you to teach and keep school within the City of New York, and to instruct all children with whom you shall be entrusted in the English, Latin and Greek tongues or languages and also in the arts of writing and arithmetic. You are therefore carefully and diligently to discharge the duty of schoolmaster in the said city and you are to receive and enjoy all such privileges and advantages as to the office and place of a schoolmaster doth or may belong. Whereof the mayor, all his Majesty's justices of the peace and other officers within the said city are hereby required to take notice and govern themselves accordingly.

"Given under my hand and seal at arms at Fort Anne in New York, this twenty-fifth day of April, 1704.

"CORBURY."

In Pennsylvania the school which came to be known as the William Penn Charter School was evidently at least partially secondary in nature. It was founded in 1689 and provided for "maintaining, teaching and instructing such and so many poor children of both sexes in reading, work, languages, arts and sciences."

Maryland, as early as 1694, passed an act providing for the establishment of "a free school or schools, or place of study of Latin, Greek, writing, and the like." Other acts subsequent to this provided for schools in different parts of the province.

In 1710 the legislature of North Carolina passed an act for the establishment of free schools to teach grammar, and other arts and sciences. The master of the school was to be "capable to teach the learned languages, that is to say, the Latin and Greek tongues, and also the useful parts of mathematics."

From these facts it is easy to see that a pretty general sentiment in favor of Latin schools prevailed throughout the colonies. Evidence is not lacking that this sentiment was, more or less, disseminated from the New England colonies and from Pennsylvania. This readily prepares us to find the legal status of secondary schools clearly defined even in the early laws of the New England states.

## II. LAWS REGULATING NEW ENGLAND HIGH SCHOOLS

Most of these states at the present time, either directly or by implication, set forth in pretty definite terms the characteristics of a modern high school. Maine, New Hampshire, and Vermont give specific definitions, the most complete of which is in the Vermont law. It reads as follows: "A school maintained by a town, city or incorporated school district for thirty-three or more weeks in each school

year, taught by a teacher or teachers of competent ability, good morals and legal certification, having an established course or courses of study for four years, or a part thereof, said course or courses following a nine years' elementary course or its equivalent, and providing instruction in all or part of the subjects usually taught in secondary schools of good standing, such as the English language and literature, higher mathematics, history, natural, political, social, moral and industrial sciences, ancient and modern languages, art, music and physical culture, shall be a high school."

Laws which further define the status of Vermont high schools provide that any town may, and every town of twenty-five hundred population or more must, maintain a high school; that instruction shall be such as to fit pupils for college; that towns having incorporated graded schools or academies may arrange to send pupils to these at public expense; that where no high school or academy exists boards must provide for instruction in other near-by towns; that within certain limitations, towns thus paying tuition to other towns may be allowed a rebate of the same by the treasurer of the state.

While the Vermont laws are somewhat more specifically worded than others, yet the chief points embodied in them may be considered as characteristic of New England. Additional provisions in other New England states are: In some states, as Massachusetts and Connecticut, transportation is provided, at state expense, to those attending at a neighboring town; in the latter state night schools are required to be established in towns of ten thousand or more population; in Massachusetts every city and town containing twenty thousand or more inhabitants shall maintain the teaching of manual training as part of its high school system, and evening high schools must be maintained by

every city of fifty thousand or more; in Rhode Island the high school is largely controlled by a state board of education.

Another feature common to some of the New England states is legislation providing for the establishment of industrial schools of different types.

### III. MIDDLE ATLANTIC STATES

Passing to the Middle Atlantic states a marked change is apparent. New Jersey alone defines the high school, and then only in very general terms. In all these states the establishment of high schools is left almost entirely to the discretion of boards of education. Delaware does not mention high schools in her laws, but the implication is that they are a part of the common free schools.

In Pennsylvania the secondary schools are divided into three classes. The first class, or grade, includes four-year high schools, the second grade three-year schools, and the third grade two-year schools. These high schools receive state aid according to grade. Children living in districts not having high schools may have their tuition and books paid for by the district from which they go. Joint township or district high schools may also be established. Teachers' certificates must state the branches to be taught by the holder. The course of instruction for high schools must be prescribed or approved by the state superintendent.

The laws of the state of New York provide for the appropriation of "\$20 per year for a school year of at least thirty-two weeks, or a proportionate amount for a period of not less than eight weeks for each non-resident pupil attending the academic department of such school from districts in this state not maintaining such academic

department and who shall be admitted to such academic department without other expense for tuition than that provided herein." This applies only to approved high schools. A later law further provides that where the customary tuition charge is more than \$20 per year the district from which the pupil goes may, by vote, make up the additional amount.

Another interesting feature in the case of New York is that the state makes a special appropriation to high schools providing professional instruction in the principles of education and in the method of instruction. These courses must be of at least thirty-eight weeks' duration in each school year. Minnesota also appropriates the sum of \$750 a year to four-year high schools that maintain courses for normal instruction in the common branches.

The laws of New York place the responsibility of constructing courses of study upon the local boards of education. The Regents of the University, however, are charged with the annual apportionment of nearly \$550,000 among approved secondary schools having membership in the University. Now as the Regents fix the regulations with which these schools must comply, they thereby exercise practical control over the programs of study of such schools, whether public or private. Pursuant to this directive authority, the state department also issues a syllabus for secondary schools, subject to revision once in five years, and outlining rather definitely the courses of instruction that must be pursued by students that take state examinations under the regulations governing the apportionment of the distributable fund for aid to secondary schools.

#### IV. THE NORTH CENTRAL AND WESTERN GROUPS

Among the states of the North Central and Western groups, the secondary school stands out prominently in the laws of Ohio, Wisconsin, Minnesota, and California. In two of these states, Ohio and Minnesota, the high school is fully defined. (See Appendix G.) In Ohio and Missouri high schools are classified in three grades, the same as in Pennsylvania.

The following states in these groups make legal provision for the establishment of township or union district high schools: Ohio, Indiana, Illinois, Michigan, Wisconsin, Missouri, Colorado, South Dakota, Utah, Washington. Similar provision is made in the laws of New Jersey, West Virginia, Pennsylvania, and Arizona.

The purpose of providing for such schools is chiefly, first, to enable rural districts to furnish high school facilities for the more advanced pupils; second, to make a larger high school district in order the more justly to distribute the burden of maintaining high schools in country towns and cities.

#### V. TOWNSHIP AND COUNTY HIGH SCHOOLS

The idea of the township high school seems to have originated in Indiana. It probably owes its origin to the congressional act which set aside one section in each township for school purposes. This type of school flourishes in Indiana, where 580 were reported in 1904.

In Illinois the township school has proved a means of enlarging the high school district, and thus establishing strong high schools in districts where they would otherwise be impossible. These township schools are usually located in cities or towns. They enjoy many advantages,

as compared with city and town high schools. They are free from many of the disturbing influences to be found in small cities and towns. They are more capable financially, and are thus able to have better buildings, equipment, and teachers. The teachers, being better paid, stay longer in one school, thus giving stability and greater continuity to the work of the high school.

The only important objection to these schools is in the fact that they are divorced from the otherwise unified system of graded schools. Forty or more have been established in Illinois, and in recent years they have become more and more popular.

For similar reasons we find the following states have given legal sanction to the establishment of county high schools: Indiana, Wisconsin (agricultural), Iowa, Kansas, Colorado, Nevada, Nebraska, California, Oregon, Montana, Oklahoma. Maryland, Virginia, Tennessee, Alabama, Mississippi, and Florida among the Southern group make similar provision for county schools. A more recent feature is the county high school fund as established in Nebraska and Kansas. In the latter state an enactment passed in 1905 established a county high school fund which is made distributable to districts maintaining free high schools. This is known as the Barnes law, and has the effect of giving to every youth in Kansas the advantages of a high school education free of all tuition. It is a local option measure, but has already been adopted by forty-three counties. (See Appendix F.)

The county high school is doubtless an offshoot from Jefferson's conception of a school system. It is a type of institution which serves a very important purpose, or rather purposes; for it has been found useful in different ways than Jefferson ever dreamed of. It is becoming

more and more common in the South and in the mountainous states of the West. In the South, among other things, it greatly simplifies the control of high schools for the whites in those sections where the negro population is relatively large. In the West it makes possible high schools in regions where the people of a county are confined chiefly to the valleys, and where often the greater part of the county is practically uninhabitable.

In both the above situations the county high school often becomes a great boon, as it makes possible a good high school training for all, even in regions too sparsely settled by white people, or by any people, to admit of maintaining high schools in smaller districts.

#### VI. STATES HAVING LIMITED ENACTMENTS OR NOT MENTIONING HIGH SCHOOLS

In the following states the only legal enactments concerning high schools are those authorizing boards of education to establish such higher grade schools: Maryland, Florida, Louisiana, Arkansas (makes it the duty of boards), Wyoming (the constitution makes it mandatory), and the territory of New Mexico. In several of the states the action of the board is made conditional on a vote by the people of the district. In the case of Virginia the law specifies that the schools of higher grade are not to be allowed to interfere with the schools of lower grade. The Maine law especially declares that "the ancient or modern languages and music shall not be taught therein [referring to high schools] except by direction of the superintending school committees having supervision thereof."

In a number of states the teaching of physiology and hygiene with reference to intoxicants and narcotics is prescribed as part of the high school course.

In five states, Delaware, Texas, Georgia, Kentucky, Idaho, no mention whatever is made of high schools in the laws. The same is true of Illinois so far as the general school law is concerned. In several special charters of cities in Illinois high schools are provided for, as also under the township high school law.

In all of the states where the law is silent in regard to high schools it is fair to say that the general statutory provisions for schools may readily be construed to include such schools. In many states, in fact, the constitutions, in providing for the establishment of schools, are readily capable of such construction. In one or two cases only does the constitution specifically mention high schools.<sup>1</sup> In the case of Illinois the constitution declares that "the General Assembly shall provide a thorough and efficient system of free schools, whereby all children of this state may receive a good common school education." The courts have construed the phrase "common school education" as properly including the high schools. Another interesting case as recent as 1904 is that of the Board of Education of Lawrence, Kansas, *vs. Dick et al.*, in which the state supreme court ruled in substance that high schools are a part of the free common schools of Kansas, and therefore tuition cannot rightfully be charged for attendance at such schools by any person of legal school age. Both these decisions are in accord with that of the famous Kalamazoo case, which sustained the law giving to school boards in Michigan the authority and making it their duty to establish high schools when ordered by vote of the people. These cases<sup>2</sup> may be said to express the status

<sup>1</sup> See constitutions of Wyoming and Utah.

<sup>2</sup> See Illinois 92-612, case of *Richards vs. Raymond*; also Kansas Board of Education of Lawrence *vs. Dick et al.*; also *Stuart vs. School District No. 1 of Kalamazoo*, 30 Mich. 69.

of high schools in all states where no special mention is made of them in the law.

## VII. IMPORTANCE OF RECENT LEGISLATION

The past few years have seen great changes in many states with regard to legal provisions for establishing and maintaining high schools. This is particularly true of the South and West. These newer provisions lift the high school into greater prominence as a factor in our legalized system of schools. One of the prominent elements in this legal phase of educational movement is the effort to find a more satisfactory basis for maintaining high schools. As the popular demand for high school education has increased at a rapid rate, school authorities have found it necessary to provide more adequate financial support in order to keep pace with this growth without neglecting the elementary schools.

Aside from the question of financing the higher schools, a frequent subject for legislative enactment has been along the line of industrial training, including manual training, domestic arts, and agriculture. These elements are thrusting themselves into the field of high school administration with great insistence at the present time, with indications that the next decade is to bring many changes from our present scheme of secondary education.

## VIII. STATE HIGH SCHOOL BOARDS

State high school boards or state boards of education having more or less definite supervision over high schools, especially with reference to the program of studies and the apportionment of state aid, are provided for by the laws of Rhode Island, Massachusetts, New Jersey, Louisiana, Arizona (territorial), Indiana, Minnesota, Virginia,

South Carolina, North Dakota, and Washington.<sup>1</sup> In a great majority of cases, however, the program of studies is subject to the approval of local boards of education. The usual procedure in these cases is for the principal or superintendent to make recommendations subject to the approval of the board.

## IX. CERTIFICATION OF HIGH SCHOOL TEACHERS

The situation among the states as regards the certification of high school teachers is by no means uniform. In a majority of cases no discrimination is made between such certification and that of teachers of elementary schools. In such instances the standard is usually that of the first grade common school certificate. This is true in most of the New England and Eastern states; but in these cases the standard for elementary certificates is usually higher in the case of first grades than in the West and South, and includes several of the more fundamental high school subjects.

In Pennsylvania the certificate must state the branches to be taught, including high school subjects. West Virginia requires that examinations be passed on high school subjects to be taught by the applicant, in addition to the common branches. In Indiana the general law for certification of teachers has been interpreted by the state department of education to mean that high school teachers must be examined on subjects to be taught. In Wisconsin secondary teachers are held to certain special requirements as to certification. In Oklahoma a general certificate or state high school certificate is required.

West Virginia, Virginia, Ohio, Nebraska, Colorado, Nevada, California, and Oklahoma provide for the issuance

<sup>1</sup> In the case of New York this same function is vested in the Regents of the University.

of a special high school teachers' certificate. This latter plan would seem to be the consistent one. It is rather remarkable that a system of certification should have become so generally prevalent in regard to high school teachers which is in no sense in harmony with the plain reading of most of the state laws on this subject.

In nearly all states one of the requirements of a valid contract is that the teacher who is party to the same shall have a certificate giving assurance of competency to teach. With secondary teachers, however, the examination and certification usually bear little or no relationship to the candidate's competency to teach the subjects required to be taught in the high school. Such a state of things is not calculated to elevate professional standards among teachers. If we argue that superintendents and boards are competent to protect the schools against poorly qualified teachers and to preserve a high standard of excellence among secondary schools, then we are making out a pretty strong case against the necessity of any certification at all.

If teachers are to be licensed, over and above some reliable evidence of adequate training in scholarship and professionally, let us insist upon a licensing which fairly meets the spirit and intent of existing legislation on the subject.

#### X. PROVISIONS FOR FINANCIAL SUPPORT

Probably the most fundamental point in the legal status of public secondary education is to be found in the provisions made for its financial support. We have found that some of the states do not legally recognize the high school as a special department of the common schools. If to these we add other states which go no farther than to authorize the establishment of high schools, we shall find

that in a considerable number of the states no provision is made for their support other than through the common fund for public school purposes.

At first thought such provision seems fair enough; but when we come to consider the fact that the results of high school training are apt to bear a more direct relationship to the successful conduct of business and industries than elementary schools, and that, too, over a wider area than the community in which the school is maintained, another phase of the question at once presents itself.

This latter element to the problem has been met in different ways by different states. One of these is in the form of state aid to high schools. Eighteen states provide for some form of aiding in the support of high schools out of the general funds of the state. In Vermont, Massachusetts, New Hampshire, and New York this appears in the form of rebates to districts where no high school exists for tuition paid to other districts. The purpose of such a plan evidently is to apply the aid to the weaker districts in such a manner as to insure the advantages of a high school training to all children who are otherwise properly qualified.

In Connecticut the state offers aid in the establishment of high school libraries and in providing suitable apparatus for laboratory work in physics and chemistry.

Maine, Massachusetts, Vermont, Rhode Island, New York, Pennsylvania, Delaware, Wisconsin, Minnesota, North Dakota, Virginia, South Carolina, and California apportion a special high school fund among the high schools of the state according to grade or efficiency. (See Appendix G.) Alabama gives state aid to county high schools, while Washington gives a bonus to union districts, and Kansas subsidizes industrial training in high schools.

Here we find more nearly represented a scheme which recognizes the broader influence of the high school. Coupled with this there is undoubtedly the further purpose of relieving local taxation in order that communities may the better provide for the support of elementary schools.

Another interesting method by which districts, otherwise too weak, are able to provide high schools for the more advanced children, is found in the union district, township, or county high school. Twenty-nine states and one territory make provision for at least one of these forms of the larger high school district. Thus, rural communities are able to provide for themselves all the facilities enjoyed by the more densely populated centers. The establishment of a larger taxable area for high school support also offers a means of relief to the overburdened town or small city, much of the population of which is apt to be made up of land owners, whose chief interests lie in the rural districts. The justness of such a plan seems evident enough, and there is no good reason why people of the rural communities should so violently oppose the plan, as they often do when effort is made thus to enlarge the high school district.

Nebraska meets the problem by a slightly different method. A special tax is provided for, to be levied on the rest of the county, to pay the tuition of non-resident pupils who attend some established high school. In Kansas, formerly, the excessive cost of the high school was provided for by requiring all pupils to pay tuition. This threw the burden upon individual families having children to school. Under the Barnes law already referred to, this apparent defect is remedied by a provision similar to that of Nebraska.

Among these different methods of providing for the more equitable distribution of the financial support of high

schools, the one of the larger high school district is seen to be most prevalent. It readily meets the need for a more liberal support than is possible where all school expenses are borne by the ordinary school district. At the same time it carries with it the principle of direct participation on the part of the people supporting it, which is recognized as an essential factor where democratic institutions are to be fostered.

State aid, on the other hand, does little or no better in regard to the distribution of the burden. The state at large must maintain its normal schools, university, and corrective institutions, to say nothing about those of a more specifically philanthropic nature.

The line of reasoning which makes it appear just and proper for the state to aid in the support of high schools may also apply to the country at large in the case of state educational institutions. The normal school does not train teachers solely for the state in which it is located. Our free system of supply and demand in that respect may send graduates of a state normal school to every state in the Union. So, also, a state university trains teachers, business men, lawyers, physicians, engineers, farmers, chemists, bacteriologists, not merely for the state in which it is located, but for the entire country and the world at large.

Now the national government is in a better position to collect the royalties which certain great industries owe to the public schools, because of the latter's dissemination of intelligence, than any state can possibly be, say nothing of local school districts. Many of these industries and commercial enterprises owe their great profits to the fact that they are national in character and continental in extent. On this basis they must be valued, if valued at all justly,

for the purposes of taxation. Why would it not be better still for the nation to extend greater aid to higher education and the training of teachers, thus relieving the burden somewhat in the form of direct local taxation? This would then leave the people free to devote more of the resources of local levies to maintaining the elementary and secondary schools, — the schools which, by their nature, attach themselves directly to the community life.

The principle of national aid already has well-established precedent. Not only has the national government aided greatly in the establishment of universities and normal schools through the early land grants, but it has also, more recently, appropriated funds especially in the interests of agricultural training. It is notable, too, in this latter case, that it has been proposed to include secondary schools among the beneficiaries of the nation.

No one questions the propriety of maintaining, at national cost, institutions for the training of military and naval officers. Yet in the perpetuation of our national existence we are certainly no less in need of trained teachers and those expert in various lines of civil public service.

## XI. LEGISLATION CONCERNING TEXT-BOOKS

Another subject which has been the cause of much educational legislation is that of text-books. In many cases, however, such legislation is not made to apply to high schools. The reasons for excepting high schools, as generally given, are, first, that the nature of high school work demands more freedom in regard to texts than is required in the case of elementary schools; second, the frequent change of books in the high school does not affect so large a group of pupils, and is therefore not a serious burden. The prevalent custom is to leave the selection of text-books

in the hands of local boards. About twelve states and territories provide for the selection of high school texts through a state text-book commission, while four provide for county uniformity through the appointment of a commission for each county. In nine of the states text-books are made free to all pupils, while in four other states they may be made free at the option of boards of education. One state, California, undertakes the publication of its own text-books.

## XII. HIGH SCHOOL FRATERNITIES

Another question which has caused considerable agitation during recent years is the Greek letter fraternity in high schools. Thus far but one state, Kansas, has enacted a law prohibiting such organizations in the high schools of the state. Several decisions have been given by courts, however, which tend to determine the legal status of high schools in this particular. Among the most notable of these are the Chicago and Seattle cases. In the latter case, known as *Wayland vs. Board of School Directors of District No. 1, of Seattle, et al.* (August 15, 1906, 86, p. 642), an injunction suit was brought against the board in an attempt to restrain them from enforcing a rule which refused all school privileges except the privilege of class attendance and graduation to students who became members of Greek letter societies. The decision of the inferior court which was in favor of the defendants was affirmed by the higher court.

In the Chicago case the contention was based on practically the same points, and the Board of Education was sustained by the decision of the court. At present the Chicago school authorities are undertaking to enforce a rule which refuses membership in the high schools to

students who will not pledge themselves to give up their fraternity membership.

These questions only bring up in a new form the oft-repeated ruling that the authority of local boards in making rules and regulations for the government of the schools under them, so long as they keep within all specified legal limitations to this authority, is absolute and final. They are interesting, however, as giving legal expression to opinions widely prevalent among teachers to the effect that the Greek letter fraternities are a serious impediment to wholesome high school administration.

### XIII. AN IDEAL SCHEME OF LEGAL ENACTMENTS

Two things must seem evident after a perusal of this chapter on the legal status of the high school in this country: First, that it is recognized everywhere as a necessary and legitimate part of our common school system. Second, that while we probably have all the elements represented, in the country at large, for the successful administration of secondary education, yet there are very few cases, if any, where individual states have brought them all together into a consistent scheme of laws. It is doubtless desirable that room should be allowed for some individuality as each commonwealth works out its own system; but it does seem possible for many of the states greatly to improve on present conditions, profiting by the experiences of others, without, in any way, seriously impairing this individual character of their schools. If we sum up the most desirable features of the various state provisions regarding high schools into an ideal scheme of legal enactments governing secondary schools, we shall have some such formulation as the following:—

1. The high school grades, for all educational purposes,

shall be a component part of the public school system of every community in which schools of such grade can be maintained.

2. These grades, as well as the elementary grades, shall be absolutely free to all children qualified by age and training to partake of their benefits. This last should be construed, however, as being within due limitations as to the distribution of numbers; such, for example, as to make it possible to relieve a congested condition in a school of any particular community as a result of an unusual or excessive number of outside pupils seeking admission to it.

3. The cost of maintaining high school grades in a given community shall be distributed among a larger number, either by means of state or national aid, by means of a county high school fund, or by establishing a larger district for high school purposes. One of the latter two plans should have the preference because they admit of more direct participation on the part of those most interested. In connection with the larger high school district some scheme should be devised for a more equitable adjustment of the cost of education to those who live far from the school. This is accomplished in some states by providing transportation.

4. High school teachers shall be required to give satisfactory evidence of special qualification for high school work both by reason of a high grade of scholarship and of professional training.

5. In order to meet present conditions some elementary instruction in principles and methods of teaching shall be provided for in fully organized high schools.

NOTE. For summary of laws see "Table showing Principal Legal Enactments affecting High Schools by States," Appendix I.

## PROBLEMS SUGGESTED FOR FURTHER INVESTIGATION

1. Origin of the type of early colonial school and its influence on the development of secondary education in the United States.
2. A study of the history and growth of the academic schools of New York.
3. A complete study of the Minnesota, California, and Vermont systems of secondary education.
4. A study of the township high school as it has developed in different states.
5. A study of important legal decisions affecting high schools.
6. A further study of state aid to high schools.
7. An investigation of the extent to which high schools are strictly free.
8. An investigation of the results where special certification of high school teachers is required.

**References.**—"Educational Legislation and Administration of the Colonial Governments," Clews. Late editions of the school laws and school reports of the various states. See also *School Review*, 12:267; 14:739, and *Education*, 24:485. "Educational Legislation in 1905," H. J. Rogers, *Educational Review*, 33:46-58; "State School Systems: Legislation and Judicial Decisions relating to Public Education, Oct. 1, 1904, to Oct. 1, 1906," E. C. Elliott, in Bulletin No. 3, 1906, Bureau of Education; "New England Educational Policy," W. Scott, *N. E. Magazine*, n.s., 20:443.

## CHAPTER III

### PLACE OF THE SECONDARY SCHOOL IN OUR SYSTEM OF EDUCATION

IN the discussions of the preceding chapters the term "secondary" has been applied alike to schools of various countries. This is not intended to imply that the groups included are the same in all cases.

#### I. SECONDARY SCHOOLS COMPARED AND DEFINED

In Germany, for instance, the *Volkschulen*, which are coeducational schools of the masses, carry the pupils to the age of fourteen. Those destined to enter the boys' *Gymnasium* receive their preparation in the *Vorschulen*, entering the secondary schools at nine years and continuing there to the age of eighteen. The *Mädchenschulen* take the girls through a course of nine years, beginning at six. At present most of the schools of the grade of the *Gymnasium* or *Realschule* open to girls are private schools or schools almost entirely under city patronage. In Prussia, for instance, while there are 272 boys' higher schools supported wholly or in part by the state, there are only four girls' schools receiving any state aid. This condition as to the higher education of girls in Germany is, however, rapidly improving.

In France the *lycée* and the communal college are organized on a plan similar to the German *Gymnasium* except that the secondary schools for girls in France are

of a relatively high order and similar in organization to the corresponding schools for boys. In all lines of higher education for women the French government is more liberal than the German. Several of the leading French universities are open to women and present courses arranged with special reference to their interests. This is particularly true of the universities of Lyons, Grenoble, and Paris. Such recognition by the universities naturally gives a greater impetus to the secondary education of the young women of France. But these, again, are not the schools for the masses. The children of the tradespeople usually leave the elementary schools of France, not to enter the *lycée*, but to take up the work of the particular trade school toward which the family occupation directs them.

In England, until quite recently, there has been little in the way of public education to correspond to our secondary schools. At first these schools were "voluntary," and were usually denominational schools. Some of the most famous secondary schools of the world are in England. Among these are Eton, Winchester, Westminster, Charterhouse, Harrow, Rugby, Shrewsbury, Cheltenham, and King's College School. But this higher grade of English secondary schools has been rather exclusively for children of the upper classes. Secondary training for the masses has heretofore been of an inferior character. Under the more recent enactments, however, it is apparent that much better things are in store for the sons and daughters of the common people.

But even though the English secondary school is poorly organized it is much more democratic than the same class of schools in France and Germany. On the continent it is practically impossible for the children of one social caste to find their way into the secondary schools of another

caste. Thus it comes about that the *Gymnasium* and *lycée* are schools of the privileged classes, while the tradespeople are confined to the *Volkschulen* and various trade schools in Germany, and to the elementary and trade schools in France. Under the stronger national system now going into operation in England the way is being opened for children of all classes to rise to the best secondary and higher training which the government can furnish.

With us the plan of grouping schools, as almost universally adopted, is too well known to need extended mention here. From five or six to thirteen or fourteen years of age the children are kept in the elementary schools. For the four succeeding years, or up to seventeen or eighteen, their time is devoted to secondary training. Where the kindergarten has been established, however, children begin at even an earlier age below the elementary grades as given above.

In recent years considerable discussion has arisen as to the real propriety of such a grouping. The present classification has probably come to us through our introduction of the traditional type of grammar school which developed in New England after the pattern of the English grammar schools. It is contended, in opposition to this traditional classification, that it is not in harmony with the natural divisions established by the more marked physical and mental changes due to growth from childhood to youth. The adolescent period begins somewhat earlier; therefore, it is pointed out, the secondary period should begin earlier, as it does in Germany. This would bring into our secondary group the two upper grades of the elementary group, thus making six years of secondary work, with a possible further extension upward.

It is doubtless true that such a division would correspond more nearly to the line of demarcation between elementary and secondary work as psychologically determined; but the recognition of this fact is more important than any change in the mere outward form of organization of our schools. That which concerns us most is the adjustment of the program of studies, throughout the entire period of elementary and secondary training, to the varying needs and possibilities in the development of childhood and youth. With us the high school is but a phase of common school education. Is it not more important that we preserve this conception of the matter in the minds of the people, than that we undertake such a reorganization of the schools in their outward form as would tend to divorce the two groups? The more apparent becomes the idea of a consecutive process in training from elementary to higher grades, the more readily will the people come to acquiesce in that fuller training which secondary and even higher education afford.

## II. WORK TO BE ACCOMPLISHED IN THE ELEMENTARY SCHOOL

Whatever we may decide as being the proper line of demarcation between the two stages of common school education as now generally in force, we must agree that the work to be accomplished in the secondary group will depend largely on what has been done in the elementary period of the child's education. In the conference held in connection with the investigations of the Committee of Ten of the National Education Association in 1892, the following points were unanimously agreed upon in regard to work to be accomplished below the secondary school: —

1. There should be training to some knowledge of elementary mathematics other than arithmetic.
2. Habits of observing, reflecting, and recording of data should be formed in connection with nature study.
3. The pupils should get an elementary knowledge of mythology and of the biographical phases of ancient history as well as of American history.
4. The training of pupils in Latin and modern language work should be begun.
5. All these subjects should be correlated and associated.

It is due in part, at least, to the recommendations of this committee that we find history and nature study to be much more intelligently handled in many of our school systems than formerly; that sporadic efforts have been made to introduce foreign language work, algebra, and concrete geometry into the work of the elementary schools; that various interpretations of correlation have been tried with varying degrees of success, but with no present agreement as to quality or quantity.

### III. ANALYSIS OF THE ELEMENTARY PROGRAM

In spite of the difficulties due to lack of adequate training of teachers in scholarship and professionally, much headway has been made in overcoming the influence of tradition which still occasionally insists on prolonged drill in the mere arts of the school as the sole function of elementary training. The advance made seems to be sufficient to warrant a somewhat more insistent demand for the reconstruction of the elementary program on a broader and more philosophical basis.

Modern pedagogy recognizes the need of training in the school arts, but it would not make this so much a matter of formal drill as has been done in the past. The educational process is conceived of rather as a process of stimu-

lation and reaction accompanied by a training in the school arts as offering a variety of means of expressing the child's reaction to stimulation. The means to stimulation are seen in nature and in what we may call, in a broad sense of the term, history. This would make the latter term include not only the written records of man's deeds, but also all other expressions of his thoughts and feelings; such as works of art, government, and all social and industrial creations.

These things, with nature, make the child's environment, as they have ever made the environment of the race. It is the work of education so to conduct the child in relation to this environment as to develop facility and fullness in giving expression to his own thoughts and feelings, or of inhibiting them in such a manner as may enable him finally to represent in his own life and conduct the highest attainments of the race.

In elementary education, then, we have come to understand that the art of reading, most fundamental of all, is taught the child in order to open to him the stores of recorded history, including, of course, the literature of his mother tongue. At the same time he is acquiring a knowledge and use of words which will aid him in recording his own observations or expressing his own thoughts and feelings as a result of his contact with nature and the works of man.

The art of writing is very closely associated with the art of reading, and is taught in order to give facility in this form of recording and expressing ideas. Similarly, the arts of drawing and of constructing are taught in order to widen the individual's range of possibilities in expressing or recording experiences. Likewise in the teaching of arithmetic we are primarily placing at the disposal of the

child an added instrumentality of expression which has to do with certain relations of matter or of space, and of man's position in them.

The real field for the child's experience is found in nature and in history, the latter including arts and institutions. In this modern conception of education we are no longer satisfied to drill in the school arts with the hope that there may be something for the child to express when he is grown up. We now give him a language, skill of hand, the art of computing, as the means by which he daily expresses himself or records his observations with regard to the earth, the sun and stars, the air, plants, animals, woodland or stream, machines, buildings, customs, the organized community life, individual and social relations and responsibilities. The art perfects itself in constant use, not merely imposed as drill work, but as furnishing the means to desired ends in expression, and in interpretation of the recorded experiences of others.

In this way the elementary school will readily turn over to the secondary stage of education a group of children who have been pretty thoroughly perfected in the use of the mother tongue within the range of their experience, and who have also learned to record, classify, and generalize as a result of their contact with nature, with their fellows, and with institutions. The things we have here enumerated the secondary school has a right to expect as a result of the training of the elementary school within the limits of the physical and mental capacity of children of that age.

Whether or not the elementary school may go even farther and undertake elementary training in foreign language, algebra, and geometry is a matter apparently not yet demonstrated to the satisfaction of many. Examples are not wanting, however, of schools where it has been satis-

factorily shown after a number of years' trial, that there is time enough in the elementary period, over and above what is required for the fundamental things in the program as above enumerated, to provide for the teaching of the extra language and mathematics. The chief requisite to the success of this arrangement is properly trained teachers.

On the other hand there are some things now undertaken in the elementary schools which might much better be done in the high school. Grammar as the science of language, and arithmetic as the science of numbers or as technically applied in business, especially belong to this class of subjects. Some of the work done under the name of geography also belongs more properly with the physical or commercial geography work of more advanced high school grades. When we put with the above the fact that the best time to acquire the rudiments of a foreign language is in early youth, that the elements of algebra are but universal terms for the expression of arithmetical operations, and that simple geometrical conceptions are necessary in much of the manual arts work of the elementary school, it seems likely that the plans outlined by the Committee of Ten may yet materialize much more fully than is true of them at present.

#### IV. THE FORWARD LOOK

As to the forward look after secondary training there are two features to be considered. Out of the completed course of the high school there come two groups. The larger of these, at present, is the group of those who go directly into the work of life. Those of the smaller group enter the higher institutions for further preparation. The tendency now is for the second group to approach the

first in size, and there can be little doubt but that this tendency will continue for some time to come.

In considering the relation of secondary school training to the immediate future of the youth, it is but natural that we put the stress on the interests of the majority if there is a difference in the kind of training demanded. That such a difference has existed in the past is evident from our historical study of secondary schools in Chapter I. We have also seen that the interests of the smaller group have often been dominant in determining the content of the program.

The tendency to-day, however, is quite the other way. This fact the higher institutions readily recognize. It is this change of tendency, together with the widening scope of university training, a fact doubtless due to the same general cause, that has brought about our present elective system in high schools. Everywhere the doctrine is to adapt the program of studies to the needs of the community life first of all, and to fitting for efficient service in that life.

As a result we find a marked inclination among college and secondary men to seek for a common ground of relationship. It is believed that the interests of the two groups may be so harmonized that the best preparation for life will mean, to the majority at least, preparation also for some line of college or university training.

Of course there will always be a residuum of those who, by reason of certain physical or mental limitations, either personal or external, will never be able to utilize any possible opportunity for such advanced training. It is concerning the education to be provided for this class in particular that there exists the most doubt at the present time. There are many who argue strongly for the

trade school and the continuation school as the only feasible means by which such a group of youths can be reached. Even here, however, it may yet be found that the elective system will serve, and that a unified system of secondary training shall persist rather than a complete segregation into trade schools and schools for a broad cultural training. There is always the possibility of fostering a tendency to social caste that must be taken into account in connection with any such proposed scheme of dividing the field of secondary education. A fuller discussion of this phase of the question will be found in a later chapter.

#### V. TRAINING OF TEACHERS IN HIGH SCHOOLS

Another way in which our high schools are at present related to the rest of our system is in the training of teachers for the elementary schools. As things now are, a large proportion of elementary teachers have no other training than that of a high school. The question which presents itself is: Shall the high schools make special provision for such training? There seem to be many who believe that the high schools are a proper place for the training of teachers. As a matter of fact, the competition of the stronger high schools with normal schools in most of the states has greatly affected attendance upon these professional institutions. If this is true, should the high schools not offer something in the nature of the professional training of the normal schools?

Those who believe in the competent professional training of teachers feel that this training should come after a good high school training rather than as part of it. They point out that a high school course is all too brief a preparation in scholarship on the part of those who are

to teach the young. To undertake to introduce into the high school any such professional training would weaken the standard of scholarship, at the same time that it will do but little good in a professional way as compared with the work of more mature people in a later professional training.

Probably it is true, however, that until higher standards as to professional training are more popular, it is best that some effort be made by well-organized high schools to give a little insight into the problems of instruction and the general management of a school.

New York has long made use of the academy as a school for the training of elementary teachers and the state has subsidized these schools for that purpose. Several of the Western states have adopted this plan temporarily as a means of meeting the demand for professionally trained teachers under more rigid certification laws. Among these are Wisconsin, Nebraska, and Minnesota.

We shall leave to a later chapter (XIII) a somewhat fuller discussion of the high school as a preparatory school than would be consistent with the scope of this particular theme.

#### PROBLEMS SUGGESTED FOR FURTHER INVESTIGATION

1. Recent development in English secondary education.
2. German and French secondary education of girls.
3. An examination of the conditions and arguments in favor of a six-year secondary group.
4. An investigation of movements now tending toward the acceptance, by colleges and universities, of the training of high schools given without regard to college preparation.
5. A study of the present relation of high schools to the preparation of teachers for the elementary schools.

**References.** — See references to European schools under Chapter I. "London Education," Witt; "Higher Education of Women in Europe," Helene Lange; "Report of the Committee of Ten"; "Principles of General Method," C. A. McMurry; "The Modern School," Paul H. Hanus; "The Educative Process," Bagley; "A Seven-year Course for Elementary Schools and a Five-year Course for Secondary Schools," Greenwood, *Education*, 27 : 550-555.

## CHAPTER IV

### GROUNDS, BUILDINGS, AND EQUIPMENT

#### I. PRESENT CONDITIONS IN REGARD TO SCHOOL SANITATION

At the present time the conditions existing in the United States are such as to call for increased attention to the material surroundings and equipment of schools on the part of principals, superintendents, and all school officials. According to data compiled in 1893,<sup>1</sup> only three or four of the states make any reasonable provisions for conditions of safety and sanitation for school buildings and grounds. Among these Massachusetts may fairly be said to lead. At the date above given one third of the states took some precaution against fire. Some great disasters since have caused a decided increase in this number. One fourth of the states guarded against contagion; one sixth required suitable sanitariums, although often the specifications were vague; two, Massachusetts and Connecticut, insisted on proper ventilation; while only one, and that Kentucky, prescribed the space to be allotted each pupil, and made some provision in regard to proper lighting and adjustable seats. But little advance, outside of the large cities, has since been made. For this reason, a discussion of these matters, at least in a general way, is quite essential to a fair treatment of any form of school

<sup>1</sup> "Sanitary Legislation Respecting Schools," Commissioner of Education Report, 1893-1894, pp. 1301-1349.

administration. It is unfortunate, however, that there are not at hand some more recent facts showing public sentiment in regard to the hygienic conditions of schools. The investigations recently made by the New York Committee on the Physical Welfare of School Children,<sup>1</sup> together with the very practical recommendations made by the committee are of interest in this connection. The reports of the recent International Congress on School Hygiene as reported in *Nature*, Vol. 76, and also in *Nineteenth Century*, Vol. 62, while of interest chiefly with reference to the European situation, are still of some value as noting the present-day sentiment, and the trend of the progress that is being made.

## II. THE SCHOOL SITE

In making provision for the proper home of a high school or other secondary institution the primary consideration is the school site. In determining a location, it very frequently happens that the chief consideration is to find a point near the center of the population which is to be tributary to this particular building. While a location that is readily and about equally accessible from all points in a given school district is a very important matter, yet it is not so vitally important as to be allowed to outweigh all other considerations.

The general surroundings need also to be taken into account, as well as the approaches to the school. All authorities on the subject agree that a slightly elevated ground, with a natural rather than a made soil, free from organic impurities, and well drained, is most desirable. Modern tendencies of secondary education also call for large grounds, with room for athletic sports and a school

<sup>1</sup> *World's Work*, 15: 9504-9505.

garden, as well as shade trees, grass, shrubs, and flowers. Where conditions require it, however, school garden and athletic grounds may be detached from the school site proper without serious loss in effectiveness.

Another point emphasized by all is that the neighborhood of the building should be free from noisy, dirty, or ill-smelling industries. High buildings should not stand so near as to cut off light and air nor echo the sounds of the street back to the class rooms. Care should be taken that pupils be not required to pass dangerous crossings, or places of resort for immoral or boisterous classes of people. The building should be set well back in the grounds, or at least so as to permit the best possible arrangement of the remaining space in adapting it to its proper uses; and as far as may be practicable it should be protected from cold winds.

### III. THE BUILDING AS A WHOLE

The building itself should be the very best which the financial ability of the district will permit. The following description of an ideal house given by Dr. William H. Burnham in *World's Work*, 2:866-871, and also quoted in the "Report of the Committee on School Hygiene of the Worcester Public Educational Association," in *Pedagogical Seminary*, 13:230-244, will serve to get before us the chief points to be considered in planning a building: "The building is entirely of masonry and steel construction, built of the best glazed brick and practically fireproof. It is two stories high and built in the form of the letter H.

"Heating and ventilation are by a combination of the so-called plenum and exhaust systems. Two hundred and fifty cubic feet of air space is provided for each pupil and

35 cubic feet of fresh air suitably warmed and moistened is supplied each pupil per minute. Distribution of the warm air and ventilation is insured by exhaust fans placed near the top of ventilating shafts, and foul air is drawn from each apartment. The arrangement of the warm-air registers and the foul-air outlets in each room is made with regard to the best distribution of the fresh air; in the recitation rooms the inlets being placed eight feet above the floor, usually on an interior wall, and the outlets near the floor on the same side. The main horizontal duct for warm air extends under the whole of the assembly room, and fresh air is introduced by a register under each seat, while the outlets are at the top of the room.

"In the basement, besides the heating and ventilating apparatus, are storerooms, lunch room, playrooms, gymnasium, shower baths, toilet rooms, and ventilated lockers for the wraps of each pupil. The plumbing is all open; the sanitariums of the best modern style and ventilated through a special exhaust duct. The light in the class rooms comes from the left, or from the left and rear, and is regulated by curtains of neutral gray green running up from the bottom as well as letting down from the top. The ratio of window surface to floor surface is 1 to 4. All the exit doors open outward.

"Especially noteworthy are the arrangements for cleanliness. The fresh air introduced to the heating apparatus is filtered through a screen of cheese cloth so that dust and other impurities are removed before it enters the fan room. The schoolrooms are really cleaned every day. There is no sweeping or dry dusting. The hardwood floors are cleaned every night by a carpet brush dipped in a special oil preparation. The oil makes the dust adhere to the brush, and in this way it is not stirred up,

but removed from the room, and the floor is improved each time it is cleaned so that once a week it can be washed thoroughly without injury. Or the simpler and more practical method of using a small amount of kerosene oil with a so-called 'dustless brush' is adopted. At intervals the rooms are disinfected. The furniture is wiped off with a moist cloth. The chalk dust is reduced to a minimum by the use of the best crayons and by cleaning the blackboards, and the little dust made is caught in removable troughs. Thus each morning the children come into a schoolroom actually clean. There are no free text-books used promiscuously, no slates, and no drinking cups; but on each floor is a drinking fountain where the children can drink from a continuous stream of water without the need of cups. Wire matting at the doors, individual lockers for wraps, and the facilities for bathing do much to insure clean clothing and clean children."

We are told by Dr. Burnham that each of the points mentioned as making up this ideal structure is to be found actually exemplified in some building now in use, although no one building may be said to embody them all.

Of course it is not to be expected that all these conditions will be attained, even imperfectly, in very many buildings; but they indicate the points to be looked after in connection with the planning and construction of school buildings. The importance of this phase of our educational work can hardly be overestimated. The well-known relationship of good sanitary and otherwise wholesome conditions and surroundings to physical and moral healthfulness is sufficient reason to justify such outlay of public funds as may be necessary in order to minimize, to the greatest possible extent, any unhealthful tendency. To do this there must be expert supervision and inspection with

authority to enforce reasonable compliance with necessary standards. In this respect, as we have seen, the United States has done but little as yet. Germany, France, and Switzerland are considerably in advance of us. During the Russo-Japanese war the attention of the world was forcibly attracted to the important bearing which proper sanitary engineering has on the success of an army in the field. How much more must it be true that in a great and prosperous nation the real perpetuation of greatness is to depend upon the conditions with regard to sanitation and moral atmosphere under which the education of our youth is to be conducted.

#### IV. TRAINING OF SUPERVISORS IN ARCHITECTURE AND SANITATION

Evidently this work should begin with the proper training of those whose business it is to supervise the work of our schools. As yet scarcely anything has been done by our normal schools and colleges along this line. One good course, at least, should be offered in every university having a department or school of education which should deal with the location and proper sanitary and artistic construction of school buildings.

Such a course, designed for high school principals or for superintendents having under their care high schools as a part of the school system, should cover such considerations as are suggested in Dr. Burnham's description. These considerations we may now discuss more in detail.

First of all is the question of building materials. It is generally agreed among experts that school buildings should be as nearly fireproof as possible, hence masonry and steel are considered ideal materials. The educational officer will need to know definitely what is to enter into

the building plan both as to materials and as to floor space. In the interests of safety he will insist on ample and well-lighted corridors; two stairways at opposite ends of the corridors and of ample width, with landings halfway up, all to be constructed of metal or at least of oak; no closets under stairways to become receptacles for combustible matter; in case a third story is necessary, two stairways all the way up, and a fire escape at an intermediate point, and readily accessible from the second and third floors. In the interests of good sanitation he will want to be sure of good drainage; of the most approved construction of closets, lavatories, and baths, with a separate system of ventilation for closets; of a system of heating and ventilating which will insure plenty of pure air properly tempered and of the right degree of humidity; of lighting facilities adequate for gloomy days and for rooms in all parts of the building which are to be used for study or recitation and laboratory work; of ventilated metal lockers to be placed in basement rooms provided with means of heating in order to dry wet clothing, the latter arrangement including floor grates or heated platforms where wet shoes and skirts may be dried; of the proper means for removing dust, cleansing floors, and disinfecting. He will see that there are emergency or retiring rooms for the use of pupils or teachers who are ill; and in districts where distances make it desirable, he will be able to see that proper lunch facilities are provided and operated in a strictly hygienic manner. In the interests of physical training he should know what is best in athletics, the necessary arrangement of grounds, the equipment of a gymnasium and the best kind of training in it, the advantages and proper use of the swimming pool if such a thing is practicable. Of course where a physical director is employed, it will be

necessary only that the educational officer know in a broad, general way what things are best or practicable. For details he may well depend upon the director to make recommendations. This also may be said of matters of sanitation where a competent engineer is employed by the school. The trouble is that no such supervising officer is now available anywhere outside of a few large cities.

The principal or superintendent should know how to dispose the different class rooms, laboratories, studios, and workshops in order to secure the best results as to convenience, lighting, and general comfort. He should know, for instance, that direct sunlight is desirable in physical and biological laboratories; that a drawing studio needs a north light; that the shop work should not interfere with class-room exercises. He will know how best to locate the offices of principal and teachers; the storerooms for school supplies, and those for housekeeping utensils and supplies; the provisions to be made for reference libraries; the arrangement of lecture rooms and work rooms in connection with the science laboratories. One of the considerations which is of vital importance to a high school is the problem of an assembly hall and study rooms. In the smaller centers it is found desirable to combine these two functions in the same room. It frequently happens in doing so, however, that not enough space is allowed for this purpose, to say nothing about allowing for the future growth of the high school. Felix Clay<sup>1</sup> estimates that in planning the assembly hall at least 6 to 8 sq. ft. of floor space per pupil should be provided, the number decreasing with the increase in size of the high school. This is certainly a low estimate. Twelve to fifteen square feet would seem more nearly correct, especially where one room serves

<sup>1</sup> "Modern School Buildings," pp. 44-47.

for both assembly hall and study room. It is hardly necessary to repeat that in this case the matter of proper lighting should be very carefully considered.

In the larger schools it is found practicable to arrange for study rooms on the different floors, so as to free the assembly hall, thus leaving it solely for school assemblies, with lighting, seating, and staging adjusted to this purpose; and also to make it possible to avoid too much stair climbing by pupils. The separate study room has other advantages. It permits of a better lighting scheme. It also makes possible such a distribution of classes for study purposes as to facilitate the better distribution of reference books, as well as the adjustment of the furniture, such as seating, tables, etc., to the work of particular groups. In some high schools the study hall scheme involves the seating of classes by departments, and the presence of one or more teachers of the particular department seated in a room in order to direct the work of preparation of the pupils more intelligently.

In other schools, where it is not practicable to have both an assembly hall and a gymnasium, the same room may be used for both, the seating in such a case being with light, folding chairs which may be quickly stacked when the room is required for physical training.

Another method of disposing of the gymnasium exercises is to place the apparatus in the corridors and to use these for exercise. This is readily practicable where the cloakroom lockers are put in the basement. However, such an arrangement detracts from the artistic possibilities of the corridors and should only be used as an urgent necessity.

Along with lavatories, cloakrooms, and other conveniences, the supervisor will not forget, if he is well trained,

the need of providing a bicycle run, and a room and workshop for the engineer or janitor. He will understand also the best system of signals for regulating the movements of classes, including the merits of a self-winding program clock.

In case of buildings unfavorably located or imperfectly constructed it will be well for him to know the merits of factory-ribbed glass or luxfer prisms in securing the desired distribution of light; to recognize the desirability of so adjusting the distribution of class rooms as to put on the side nearest a noisy street the kinds of work least likely to be disturbed, such as manual work in art room or laboratory; to appreciate the advantages of holophane globes where electric or gas lights must be employed to reënforce the insufficient sunlight on gloomy days or for the night school; to be able to improvise means of imparting added moisture to air that is overdry.

Evidently there is enough material here for a good solid course in schoolhouse construction and sanitation. True, it may properly be said that this is the work of a specialist and should not be added to the duties of the school supervisor; but as matters are now adjusted, and as they are likely to remain for a long time in most school districts, no such additional expert supervision of school buildings will be provided. Meantime a matter which so deeply concerns the safety, healthfulness, and economic training of youth can hardly be intrusted to the unskilled management of educational boards without at least suggestive direction by one who has given some intelligent thought to the problems involved.

In any case it is desirable that the principal of a large school, or the supervisor of a group of schools, should possess a reasonable fund of reliable knowledge of these

matters. In the smaller high school centers, of course, it is sometimes necessary to house all the schools under one roof. In such cases difficult problems may present themselves, owing to the absence of sewers, gas, etc. Hence, there will be all the more care needed in selecting a proper school site, and also in providing sanitaries that will not belie the name. It is perhaps in such cases that there will be most need of some knowledge on the part of the principal or superintendent of the principles involved in building sanitary and serviceable school buildings.

### V. FACTS TO BE IMPRESSED

Some of the facts in regard to high school buildings which should be impressed upon the public mind are:—

1. That the building should be planned for the specific work of the school which is to use it.
2. That wherever practicable a separate building should be assigned to the use of the high school, or at least to the high school and grammar grades.
3. That a sanitarily heated and ventilated building is a matter of real economy.
4. That the system of ventilation should furnish at least 30 cu. ft. of fresh air per minute to each pupil in the school.
5. That the average humidity of the atmosphere should not go below 50 per cent.
6. That light should be introduced chiefly from the left side, which should be the longer side, with possibly some from behind the pupils, as they are seated in the schoolroom.
7. That the transparent glass surface should be one fourth the floor surface of the room to be lighted, and that the darkest part of a room where reading or studying is done should receive an illumination of not less than 50 candle meters.
8. That with a proper degree of humidity an even temperature of 68° to 70° should be maintained.
9. That floating dust in a schoolroom is one of the chief means of distributing harmful bacteria.

It is a good thing also for those who have the management of school affairs to know that where the heating is by steam it is a comparatively simple matter to provide the school building with power for use in connection with the shops or even for the production of lights for the school.

## VI. *ÆSTHETIC CONSIDERATIONS*

Another important matter which enters into the consideration here is the relationship of a school building to the æsthetic training of a community. This has reference both to the architectural effect of the exterior and to interior finish and decoration. We may all agree that it is desirable to have a building possess a sort of individuality, even to the extent of reflecting its purpose; but there is a growing feeling that we have had enough of that general institutional type of architecture which has long been considered the proper thing in buildings of a large, general class to which schoolhouses have been assumed to belong. Yet this modifying contingency occurs in the case of school architecture: Educational work is in such a state of flux and evolution as to make uncertain what type of building may be needed twenty or twenty-five years hence. It is evidently not desirable, therefore, that buildings intended to outlast the century should be erected. For this reason, perhaps, a rather severe type may well be adhered to externally, the chief considerations being sufficient stability for present purposes, and the maximum of safety. Expensive cupolas and towers, for instance, may well be dispensed with along with the ponderous school bell of the past. However, the architect may still easily introduce some elements of ornamentation in connection with entrances, windows, cornices, or other external features.

It is the interior of the building, however, which offers

most in the way of decorative effort. The stairways, corridors, and assembly room, as well as the various class rooms, offer ample opportunity for the presentation of artistic effects. From the tinting or decorating of the walls and ceilings, the finishing of the wood casings, to the hanging of pictures and the placing of statuary, strength, beauty, and refinement of taste may combine in such a manner as to add greatly to the wholesome influence of the school building, not only upon the pupils but upon the community at large. These also are things which some one who has to do with the fitting up of the school should understand and insist upon to the extent of the ability of the district to provide.

In the matter of class rooms, for instance, undoubtedly the scheme which gives to each room a certain individuality should prevail. The psychological effect of such a change, as classes pass from room to room, and the advantages of it over a general monotony of color and effect is readily appreciable even to the casual observer. Nor should good hygienic effect as to the lighting of rooms be forgotten when choosing tints. If it is practicable to give the pupils a part in this work of planning interior decorations, or even of providing them, the advantage to the life of the school and community will be much greater still.

## VII. FURNISHING AND EQUIPPING A HIGH SCHOOL

The furnishing and equipping of a high school building is in itself a complex undertaking. Here the principal may well rely upon the head teachers of the various departments for suggestions, if not for complete recommendations, for their respective departments. It is not within the scope of a single chapter on this subject to go into the details of such furnishing and equipment, but

rather to lay down the general lines and principles on which it is to be done.

As in planning the building, so the furnishings for each room should be determined by the use that is to be made of it. Where school desks are used they should be, preferably, the adjustable desks; for there is no regulation size of school desks that is suitable for all the pupils of high school age. As well expect that a suit of ready-made number ten knickerbockers would fit any boy ten years of age. Some of the class rooms will be better adapted to their use if seated with chairs equipped with writing tablets; others will need tables and common chairs; and others still would better be seated with desks. In the case of laboratories, studio, and business rooms, specially adapted furniture will be called for. In all these particulars it will be worth while to examine carefully into the different types of furnishings before the contracts are made; and in every case the best-constructed furniture as to materials and finish will be found most economical as well as most satisfactory.

In smaller high schools one room will have to serve for all laboratory and lecture work. This room should be fitted with a teacher's demonstration table, supplied with gas, water, and electricity where these are available. The room should contain, besides, one good sink, tables enough for the experimental work of the pupils, a work bench with a kit of the more common tools for working in wood, an assortment of files, a pair of good pliers, and a small iron vise and anvil. There should be cases with good close-fitting doors for storing apparatus. An aquarium will add greatly to the interest in biology work. Common chairs may be used for seating. Besides the usual apparatus, which should be selected chiefly for individual work by

the pupils, the room should have, if possible, a stereopticon and screen with lens attachments for microscopic work. In fact, it is very desirable where practicable to have proper stands provided for the use of the lantern in all the leading departments of the high school and in the assembly room. In the larger high schools a very economic arrangement of laboratory and lecture rooms is to put them in suites for the physical and biological sciences and the geography work, respectively. In this case a very satisfactory arrangement for the physical science suite is a tandem effect, with the lecture room between the two laboratories, storerooms opening from each laboratory, a workroom opening from the physical laboratory. In the storeroom connected with the chemical laboratory it may be found desirable to construct a fire-proof closet for the safe keeping of such chemical supplies as may be liable to cause combustion. The furnishings, such as tables, lockers, baths, gas, and electricity, should be such as are found in the best schools equipped especially for high school work.

In the drawing studio should be properly constructed desks and adjustable tables. An adjacent storeroom should contain such materials, models, etc., as may be supplied. Lockers should also be provided for the materials and instruments of individual pupils.

For library purposes it will probably be found best in a large high school to have a central library room with full cataloguing facilities, and bookshelves distributed through the various class rooms or study rooms where such books as are needed for reference in particular departments may be sent out properly recorded from the central library room. Reading tables for newspapers and magazines may be either in the central library room or the study rooms, as convenience may indicate.

For domestic arts, manual training, and other constructive work, and for physical training, it will be found desirable to fit up rooms or suites, as the case may be, equipped with the most approved furnishings for such departments of work, and provided with storage room for supplies.

### PROBLEMS SUGGESTED FOR FURTHER INVESTIGATION

1. An investigation of English, German, and French secondary school architecture.
2. A study of the high school buildings of New York, Boston, Chicago, or St. Louis.
3. Sanitary inspection of schools in Germany, in Switzerland, and in Austria-Hungary.
4. A study of heating and ventilating systems.
5. A study of the school lunch room in the United States.
6. The school garden as a feature in secondary education.
7. Grounds for recreation and sports of high school students.
8. Detailed study of equipment for manual training, for drawing, for domestic science.

**References.**—“Modern School Buildings” (English), Felix Clay; “School Architecture,” E. M. Wheelwright; “The Schoolhouse,” Moore; “School Hygiene,” Shaw; “Sanitary Legislation respecting Schools,” Commissioner of Education’s Report, 1893-1894, pp. 1301-1349; “The Ideal Schoolhouse,” William H. Burnham, *World’s Work*, 2: 866-871; “Report of Committee on School Hygiene of the Worcester Public Educational Association,” *Ped. Sem.*, 13: 230-244; “The Essentials of School Building,” *American Architect*, 80: 28; “Medical Inspection of Schools,” *Ped. Sem.*, 7: 70. See also *World’s Work*, 15: 9504-9505; “A Practical Plan for Medical Inspection of School Children”; also articles on “School Hygiene” in *Nature*, 70: 349-350, and *Nineteenth Century*, 62: 388-394; “Labor and Childhood,” Margaret McMillan; “Sacrifice of the Eyes of School Children,” Scott, *Pop. Sci. Mo.*, 71: 303-312; Boston School Committee: “Report of Committee of Oculists and Electricians on the Artificial Lighting and Color Schemes of School Buildings,” Boston School Doc., No. 14, 1907; “Two Recent High Schools,” *Architects’ and Builders’ Magazine*, n.s., 8: 251-265.

## CHAPTER V

### TEXT-BOOKS AND OTHER SUPPLIES FOR THE USE OF PUPILS

It is the purpose of this chapter to consider such supplies, along with text-books, as pupils are usually expected to have for their own more or less constant use as individuals. The text-book is the most important item in this list. Other things are notebooks, pens and pencils, drawing instruments and materials. Text-books are almost purely a school device. They represent the formal arrangement, each according to some particular mode or theory of presentation, of the materials of various subjects taught in the schools in such a way as to include only what is thought to be essential to a given stage of educational progression. Their general purpose is supposed to be to furnish a ready-to-hand organization of this material as a means of saving time to the teacher as well as to the pupil.

#### I. GROWTH OF THE TEXT-BOOK IDEA

Text-books have grown out of the practice, in the earlier history of teaching, of assuming it to be a function of the teacher thus to sort out, prepare, and present in some organized form the subject-matter of education. It seems to be one of the first impulses of a teacher who hits upon some new idea concerning the presentation of his subject to produce a new text organized around this idea. As a result there are almost numberless texts for most of the

subjects now taught in the common schools. Some of these texts attract attention because of the selection of subject-matter which they present. Others are conspicuous because they emphasize a special method of teaching. Others still base their appeal for public favor solely upon the mere mechanism of arrangement and perfection of make. In this latter case such things as marginal indexes, convenient reference indexes, typographical superiority, illustrations, and the quality of stock and binding are emphasized.

## II. WHO PREPARE OUR TEXTS?

Until recently most of our high school texts have been prepared by college men. As a result these texts have reflected strongly the matter and method of the college. It is for this reason, probably, more than for any other cause, that the charge of attempting to dominate the teaching methods of the high schools has been directed against the colleges and universities. When we put with this the fact that college graduates frequently become the high school teachers who are to use these books, it is not at all strange that the influence of the college upon the methods of high school instruction is somewhat marked. Of course this is an accident due to conditions rather than an intentional and concerted action by the colleges and universities. These institutions are as ready as any others to set matters right when they become aware of the situation. The fact still remains, however, and may well be considered as one of the important problems connected with the text-book question.

Recently high school and normal school instructors have taken up the task of preparing high school texts, with good results in many cases. The tendency in the case of high

school men is that they take too limited a view of the subject in their effort to "write down" for high school pupils. With texts coming from normal school men the chief limitation thus far seems to have been a tendency to over-emphasis of method, thus obscuring somewhat the real purpose of presentation.

### III. NOTEBOOKS AND PENS

Notebooks are coming to be almost on an equality with texts as to both necessity and variety. More and more the prepared notebook, adapted to a particular subject, with a certain ruling or other quality of paper, with outline maps, or laboratory directions and experiments, is coming into use.

The amount of writing called for from the pupils and required to be in ink has made the fountain pen almost as indispensable to the high school student as the text- or notebook.

All these things entail a heavy burden of expense upon high school pupils and make it constantly harder for the children of the poor to share in the privileges of secondary education. For this reason it is well that we give some consideration to this very important factor in the wise administration of the high schools of the people.

### IV. REGULATION OF THE COST OF TEXT-BOOKS

Public sentiment has long since been aroused on the subject of text-book and other supplies, and many different schemes have been set in motion by legislative enactment having for their purpose the lowering of expense to the patrons of the schools. This public interest in the matter has raised the question as to who should really furnish text-books and other pupils' supplies. Some contend that the

idea of free schools carries with it the free provision of all things essential to the work of the school. Where the law makes school attendance compulsory, the correctness of this argument is generally conceded. This does not usually affect pupils of high school age, however; and hence the question is not so readily agreed upon where it refers to the texts used in the secondary schools.

Thus far thirty states and the District of Columbia have enacted laws providing, in one way or another, for free text-books. Of these, nine limit the application of the law so as not to affect high schools, leaving twenty-one states where free high school texts may be supplied. The twenty-one are: Maine, New Hampshire, Vermont, Massachusetts, New York, New Jersey, Pennsylvania, Delaware, Maryland (by progression), West Virginia, Wisconsin, Minnesota, Iowa, North Dakota, South Dakota, Nebraska, Montana, Wyoming, Colorado, Idaho, Washington. Of these the following ten states have mandatory laws: Maine, New Hampshire, Vermont, Massachusetts, New Jersey, Pennsylvania, Delaware, Maryland, Nebraska, Wyoming. In the other eleven states it is made a matter of local option. Where this is true, however, the result generally seems to be in favor of free texts.

Of course there are arguments both for and against free texts in high schools. If a pupil owns his texts, he feels free to mark them with marginal notes for future reference. This is apt to be especially desirable in case of texts on literature or history, although the need is not so apparent in the case of immature high school pupils as with older students. Then, too, there is less danger of contagion. Unless books are very carefully disinfected, where they are loaned to different students, they may readily become the means of transmitting infectious dis-

eases. Personal ownership and the proper care of one's belongings are also desirable experiences to be cultivated in youth. There is ground for the objection urged, for instance, that a child feels a sort of mean dependence in any case in accepting books at the hands of the board. Thus closely do we associate ownership with the spirit of freedom in the individual.

On the other hand, books can be furnished at a much lower total cost when bought by the district. They can be much better preserved and cared for. This is true because the teacher has a more clearly recognized right and duty in requiring that books be well kept. Usually this is accomplished by a system of fines and forfeitures. As to the sanitary consideration above referred to, various devices have been constructed which greatly simplify the process of disinfecting books. The furnishing of free texts and supplies makes it easier for the children of the poor to get some high school training. It is true that these may be provided for in any case; but where all receive the books free, there is no feeling of shame on the part of indigent children at being singled out as objects of charity. When all things are considered, it is probably true that the free text-book plan is best, and the preference evidently is for the optional form of the law rather than the mandatory. In some cases where free text-books have been provided, it has led to the adoption of a slight modification of the plan in the way of charging a small rental, say, 50 cents a semester, for the entire supply of books needed by a high school student. The moral and economic advantages of such a rental charge make it worthy of consideration. Such a nominal fee would not stand in the way of any pupil who really wanted to go to school, while it would relieve, somewhat, the feel-

ing of being a recipient of charity, at the same time that it would preserve something of the sense of proprietorship. On the side of the school it would go far toward paying for the up-keep of the supply of books, and would lessen the number of individual holdings of texts, a condition which might otherwise be a hindrance to needed changes.

## V. UNIFORMITY

In any case it is evident that the free text-book plan is the most popular one in the country to-day. Next to this comes the adoption by a state text-book commission or by a state board of education of a uniform series for the state. Twelve states have provided for such adoption for high schools. The number of states having uniform adoption for elementary schools is still larger. Three states provide for uniformity by counties. Some few of the states counted in the uniformity list also provide for free texts; but when allowance is made for this, it is easy to see that the great majority of all the states and territories have sought in one way or another to relieve the public from a portion of the burden which comes to those whose occupations are such as to require frequent removals from one part of a state or county to the other.

Another argument for uniformity, secured either by large adoptions or by a system of free texts selected by a central board, is the advantage which such a scheme is believed to give in the carrying into effect of state or county courses of study, or in conducting state examinations for the standardizing of state aid high schools.

If this whole matter were left to high school teachers, however, it is probable that there would be very few who would vote for uniformity. The chief contention would be that the nature of high school work is such as to call

for greater freedom in the selection of texts. It would be pointed out, for instance, that a course in ancient history given in the third or fourth year of the high school might require a text more comprehensive in treatment and difficult in style than a book for a similar course offered in the first year of high school. Or it might be said that a half-year's work in zoölogy or physical geography might be accomplished with the use of simpler texts than a full year's course.

Perhaps enough has been said to indicate considerable room for difference as between uniformity for elementary schools and a uniform series of texts for all high schools. Here, again, the free text-book plan comes to the rescue, and gets for the public all that uniformity can give without the disadvantages which uniformity alone is believed to impose upon high schools.

## VI. SELECTION AND ADOPTION OF TEXTS

Whatever may be the method of furnishing text-books, their selection and adoption will always be a matter of interest. What may be considered the proper criteria by which they are to be selected? In the first place, text-books are, by the nature of the case, subjected to rather hard usage; they should therefore be of good materials and thoroughly well bound. They are to be used more or less extensively by pupils as sources of information to be read and reread; they should therefore be very clearly printed. The marginal and general indexes should be carefully made, with a view to indicating definitely to the reader the place of treatment of any particular phase of the subject. The illustrations, if any, should be clearly printed, and should be such as to add something to the significance of the book as a whole, as well as to a clearer

understanding of the particular thing which is illustrated. Last but not least, the subject-matter should be authentic, and complete enough for the educational purpose for which it is compiled. On this point it is a pretty safe criterion that a book on a given subject should be prepared by some one whose interest in and knowledge of the subject render him competent as an author.

Generally speaking, a fairly complete text, even though too full for thorough treatment in the time which may be allotted to the subject, is preferable to one which is barrenly meager on any of the more essential features. All texts are made, not for one particular situation, but with the idea of their adaptation to many situations. Frequently pupils will read the fuller text, even though parts are necessarily omitted in assignment, and thus get a larger view than they might ever do if dependent upon a very brief or condensed treatise and upon outside references. It is well, also, that a book should give references to other and fuller sources of information where the subject is of such a nature as to make their use desirable in a more exhaustive study of topics.

So thoroughly have we given ourselves up to the textbook idea in this country that the frequent changing of texts in a given subject is almost a mania among teachers. Of course there may be cases where conditions would be slightly improved by such a change; but how about the possible improvement of the teacher, say nothing of the wider outlook which the pupils will get, if their instructors should thoroughly adapt the old book to the situation? This may be done by rearrangement, substitution, omission, or supplementing. Such adaptation often brings far better results than even a new text.

But when once a change is to be made, how is it to

be accomplished? In a high school where there is any semblance of departmental arrangement of work, the first recommendation of a text should usually come from the teacher of the subject. Reasons for the choice should accompany the recommendation. If the choice seems satisfactory, the principal may transmit it directly to the superintendent, and the superintendent to the board of education, for approval. Such a review of the teacher's recommendation by both principal and superintendent will enable them to guard against neglect to consider the more general interests involved in a change of text-books, at the same time that it is made desirable on account of frequent changes in teachers.

If there is reason why the principal or superintendent should question the wisdom of the choice, it seems fitting that a consultation be had with the teacher in order to get at the case fairly. Ultimately, of course, the superintendent's recommendation to the board should prevail; but it is best always to remember that the teacher is probably the one most directly affected aside from the pupils. If the difference hinges on a point that is of serious concern to the welfare of the pupils, however, they should always be given the benefit of the doubt.

## VII. CORRUPT METHODS OF PUBLISHERS

The above method of procedure in the adoption of books presupposes that this choice is to rest in the hands of the school authorities of the district. In many states, as we have seen, laws have been enacted for the purpose of providing for uniformity of text-books. In some cases the law has made provision for state uniformity through a text-book commission. In other states the law has provided for county uniformity only, making it either mandatory or

optional and subject to a vote of the people. Much trouble has arisen out of this method of adoption. There is no doubt but that it has often resulted in greatly hampering the work of high schools. It has also caused many scandals, and, frequently, the indictment of men in high places because of corrupt methods used by publishing houses in securing an "adoption."

By the free text-book plan most of these difficulties may be obviated. Of course the argument in favor of uniformity from an economic standpoint would disappear if pupils did not have to buy books. School authorities would then feel free to adopt such books as, in their judgment, would best serve the particular needs of their community. There would still be the possibility of corrupt methods in adoption, but the stake would not be so large and the temptation to the use of objectionable methods therefore much less.

The state of California has undertaken to meet this problem by the state itself becoming the publisher of its school texts. At first the texts were especially prepared by local talent employed for the purpose. This resulted in an inferior quality of texts, and was more or less damaging to the educational interests of the state. Later it has become the custom to purchase copyrights wherever suitable manuscripts can be found or to buy the use of any copyrighted book for the state of California. Under these latter arrangements much more satisfactory results are obtained. It does not seem likely nor desirable, however, that this method of dealing with the school book question is ever to become a common practice. We need all the freedom of initiative possible in order to call out the best talent among authors as well as the best workmanship in the making of school books.

The extensive use of text-books, the large number of varieties published, and the insistent demand for changes have resulted in building up an immense volume of business. A number of great corporations and some alleged trusts have resulted. We have already seen how temptations arise out of the desire for larger business and how the strenuous competition often leads to corrupt methods in securing the adoption of books. This is probably no worse than in any other line of business competition. But the association of it with our educational system is what renders the evil more startling. Naturally, the representatives of these publishing houses, who are "out for the business," seek to cultivate, by every possible means, the good-will of those upon whom devolves the recommending of books for adoption. As a consequence teachers, principals, and superintendents are frequently placed under a close surveillance by rival firms. They are sometimes urged to accept favors at the expense of "the house" or through the good offices of some representative of it. Cases are not unknown where teachers have been threatened with loss of their positions when they have refused to make the recommendations desired by representatives of the publishers of certain texts. In a vast majority of cases, it is fair to say, the publisher relies upon the psychological effect of the favors shown to produce results. Such resort to threats as above noted is rare. The point to the case is that the teacher, principal, superintendent, or board member who accepts a bribe, however mild in form, or however it may seem to be offered, is likely to permit his mind to be prejudiced thereby.

Just what the outcome and effects of such a condition are to be is a matter of some concern. It seems evident

that teachers everywhere should use great discretion in such matters. It is to be hoped also that the publishers of school texts will find it more and more desirable to frown upon all doubtful practices on the part of their representatives. As in many other social interests, this is a case where a very few evil doers may cause general distrust and dissatisfaction with large and otherwise legitimate and desirable business interests.

### VIII. OTHER SUPPLIES OF PUPILS

As to other supplies of pupils, most schools furnish such items as paper, pens and ink, and drawing materials. Specially prepared notebooks should be placed in the same category as texts. The more common notebooks for seat work or class work and not for preservation would better be furnished by the pupils themselves. Otherwise they are liable to become very wasteful of this material, thus acquiring an expensive and evil habit.

### PROBLEMS SUGGESTED FOR FURTHER INVESTIGATION

1. Growth of the use of text-books in schools.
2. An examination of high school texts with a view to ascertaining the extent of the influence of college methods upon the treatment of secondary school subjects.
3. An examination into the working of free text-book laws.
4. A study of the California plan of publishing texts.
5. A study of the history of state adoptions.

**References.** — "Our Schools, Their Administration and Supervision," Chancellor; "Administration of Public Education in the United States," Dutton and Snedden, especially Chapter XIII; Recent Reports of U. S. Commissioner of Education; Recent Educational Reports of New York, Pennsylvania, Wisconsin, Missouri, Louisiana; California Report of 1905-1906. (See topics in these Reports on text-books.)

## CHAPTER VI

### EMPLOYMENT OF TEACHERS AND ORGANIZATION OF THE INSTRUCTIONAL WORK

THE real dynamic force of the school is the teacher. It is necessary that the general organization of schools be provided for by wise laws. It is desirable that we have modern and well-equipped school buildings. The best possible adjustment of the program of studies may well call for our careful study. But with all these things at their best the school without the teacher is the soulless body. There is no greater need for the cause of education to-day than the need of strong, manly men and womanly women as teachers of the young. To secure these for the schools of the nation we may well give of the best of our thought, the wisest of our legislation, and the most bountifully of our wealth.

#### I. AUTHORITY TO EMPLOY TEACHERS

The legal authority to employ teachers and principal or superintendent of the secondary school is vested in boards of education where the schools are public schools, and in boards of trustees or proprietors of other institutions. This authority carries with it the powers of contracting and annulling contracts. The power of making rules governing the plan of operation of schools and also of providing schools with their material equipment is vested in the same authorities. The practice is very general, in this

connection, of consulting the wishes of the principal or superintendent and allowing him to nominate suitable teachers to work under him and to suggest suitable plans for equipment as well as rules of operating the school. In the smaller public school centers where all social organization is less complete and where the affairs of the particular social group are traditionally a matter of general public sentiment, such vested privileges are yielded grudgingly by the people and often get no farther than the board of education. In such cases the principal or superintendent has little or no authority above that of the individual teacher. It not infrequently happens under these conditions that the schools are practically so many individual groups, each administered by the teacher under the more or less definite direction of the board.

As we ascend to larger centers, however, where the people are compelled to resort to more definite division of function in the social group, we find the organization of the schools more complete. In such centers the superintendent, and often the high school principal, comes to have clearly defined rights and privileges. Much of the authority vested in boards is delegated to the superintendent under the rules of the board governing the schools. He, in turn, may be permitted to delegate authority to the principal of the high school.

As the work of the secondary phase of education is somewhat strongly differentiated from that of elementary schools, requiring radically different treatment in many matters of organization and discipline, it happens that, as a usual thing, the high school principal comes to have a unique relationship to the organization as compared, for instance, with the principal of one of the district elementary schools of a group. This same difference is often

recognized when it becomes necessary, as in large cities, to divide part of the work of the superintendent of schools among assistant supervisors. The plan in such cases frequently is to distribute the work by horizontal rather than vertical lines of division. In such an instance there would come to be a supervisor of high schools who would be the means of direct contact with high school principals in all matters of privilege and authority, as well as in the administration of educational policy. It is needless to say in this connection that few educational centers under local boards are large enough, or have a sufficient number of high schools, to employ an exclusive supervisor of high schools. In some cases, as noted in Chapter II, states have undertaken some such special supervision under state high school boards or state boards of education.

## II. PLAN OF ORGANIZATION

The plan of organization of the work for purposes of instruction also varies as we pass from smaller to larger groups. The frequent absence of any clearly recognized expert authority in the case of smaller educational centers often leads to curious complications. Under our present system, or rather lack of system, of training teachers, it most frequently happens that teachers are best prepared to teach along certain lines, while there are other subjects taught in high schools of which they know little or nothing. With no one to plan the selection of a group of teachers so as to provide a competent teacher for each major subject with a proper distribution of minor subjects, it frequently occurs that two or more teachers with practically the same special training will be employed, thus leaving some one or more to be assigned to the teaching of subjects for which no very complete preparation has been made.

Where there is a sufficient number of teachers to permit, it is customary to arrange the work of instruction on the departmental plan. In such a case one or more teachers would devote full time to one particular group of high school courses, as English, history, mathematics, science, or foreign language. If we omit from consideration those who are still classed as "special" teachers or supervisors, five teachers is about the least number that will admit of full departmental organization. In the case of smaller groups, however, three teachers whose training has given them fair mastery of two major subjects may preserve at least a semblance of departmental order. For instance, one may teach science and mathematics, another English, including English history, and the third foreign language and history. In case one of the three is principal, however, he should not be the one to assume the science work, as this will consume too much of his time where laboratory work is provided.

In the larger schools there is considerable difference in practice as to the completeness of organization departmentally. The logical plan would seem to be, as the number of teachers increases, to organize each department with a head teacher and assistants. This would throw the leadership and responsibility for good results upon the departmental head. Such a plan is very commonly met with in the larger schools, but it is by no means a universal practice. In some of the most prominent school systems of the United States the plan is adhered to of making each department simply a coördinate group of teachers all of whom are independently responsible to the principal, each for some particular phase of the work of a given department. A form of departmental organization which has been found to work well in large schools is that of head teachers over

related groups of subjects. This plan requires fewer heads of departments and also admits of a closer correlation of such related subjects as are thus grouped.

The plan of organization by grades, with grade principals, also has its adherents, but is not so commonly in use as departmental organization.

Occasionally, also, we find high schools where, although they are large enough readily to admit of departmental organization, most of the teachers are found working along two or more different lines. It is not always considered necessary, even, that these lines be in any sense related lines. In fact there are some very good high school principals who are inclined to be skeptical as to the results of too close specialization on the part of high school teachers. They rather hold that the broader view which the treatment of two somewhat different lines of work gives and the consequent saving from atrophy of certain mental powers of the teacher are the things to be desired in one who is to guide the youth in this peculiarly critical stage of his training. May it be possible that the elective system has something to do with this tendency and that it is used as a means of preserving a balance of influence among high school teachers? That teacher is certainly placed in a difficult situation who finds her leading subject without favor among the elective subjects of the program. Or is it possible that we may yet find it desirable thus to modify permanently the departmental idea given us from the colleges in order to preserve the balance of the mental powers of those who may *only* teach, and to whom, consequently, there is no time given for that continuous research which may usually be depended upon to preserve the college specialist from such a narrowing process?

### III. INDIVIDUAL WORK

There is noticeable also a tendency to emphasize more and more the needs of the individual pupil. The heuristic method prevails generally in science and manual arts work ; and this has its influence on the instructional plans of other departments. The practice noted in another chapter of seating pupils of one department together for study and giving them the advantage of personal guidance and help from teachers of that department is another indication of this tendency to look after the needs and interests of the individual. Still another plan is to employ an extra teacher having a good general preparation and a large fund of sympathy and common sense with whom pupils who are having special difficulty in any subject may consult. Such a teacher is assigned a room or office suitable for the purpose and is on duty regularly during the hours of study and recitation at the school.

### IV. RATIO OF PUPILS TO TEACHERS

The whole question of the ratio of the number of teachers to the number of pupils is involved here. The few authorities who have spoken on this subject seem to agree generally on allowing for one teacher to each thirty pupils. This is the ratio which prevails in the best European schools and it is also the formal recommendation of the North Central Association of Colleges and Secondary Schools. Recent statistics on this point show the following conditions in a number of our large city high schools. The ratios given are based on the enrollment at the opening of the present school year (1908) and the teachers counted are exclusive of teachers of business, music, drawing, manual training, and domestic science:

Buffalo, 1:30; Cleveland (Central), 1:30; Detroit (Central), min. 1:25, max. 1:32, with an average of 28 or 29; Des Moines (West), 1:30; Indianapolis (Shortridge), 1:34; Kansas City (Central), 1:30; Milwaukee (East Division), 1:30; Minneapolis (Central), 1:32; New York City, De Witt Clinton, 1:30 or 35, Morris, 1:30; St. Louis, 1:25; St. Paul (Central), 1:30; Washington, D.C. (Central), 1:27 or 28. In Chicago the rule until recently has been 1:28:35, but this has been amended since the opening in September so as to read 1:30. Most of the cities above reported have no formal rule, but act upon the general ratio of about 1:30 in employing teachers. The question involved is a larger one than that of a flat ratio of one to thirty more or less. There are wide differences among different subjects, and even in different phases of the same subject, in this respect. There are cases where a group of twelve is large enough for one teacher; while in other exercises forty or fifty are readily managed at one time. Take, for instance, a group doing laboratory work in science and a class in ancient history. While it is probably true that better results will be obtained even in the history with a small group than with a large one, yet it is evident that the more urgent need of the small group is in the laboratory work. The same principle applies to English where the laboratory method is employed as compared with the general class method. In the best-organized high schools the employment of laboratory assistants in science and of readers in English composition is found to be an effective means of managing classes otherwise too large.

It is probably safe to assume that the ratio should be fewer than thirty to one rather than more. When we consider, however, that the question of the number of reci-

tations to each teacher must also be fairly met, it is evident that the whole problem is one of financial ability. It is generally agreed that five recitations per day averaging forty-five minutes in length are all that one teacher should undertake to do. Here again a mere arbitrary rule leads to inconsistencies. In a small school, where one teacher must prepare in two or three different subjects, five recitations means much more work in preparation than the same number in one subject, and especially, as sometimes happens, in one particular course of that subject. Then, too, such work as English composition often involves a large amount of labor in reading and marking themes and in consultation with pupils which is usually in addition to preparation and recitation work. The question is largely one of relative fatigue on the part of the teacher, and if it is to be adjusted fairly, must be dealt with as such. One of the best methods of providing for the equalization of work in large high schools, or systems of schools, is by the employment of cadet teachers at nominal salaries to assist in departments where the pressure of work is relatively heavy for the individual teachers of a department. This has the double advantage of furnishing the desired relief and giving opportunity for training in experience to those just entering upon the work of teaching.

Such a method, if more generally used, would help out the situation in another way. It is the common practice in our present scheme of high school administration for the stronger schools to seek almost exclusively teachers whose training has been supplemented by a year or more of successful experience. This throws most of the beginners who are fresh from college or normal school into the smaller schools where the work is often excessively heavy and the supervision comparatively weak. As a result

many failures occur and not infrequently by those who are capable, under proper conditions, of becoming strong teachers. A more general cadet system in our stronger high schools where there is usually competent supervision would do much to lessen this evident evil.

## V. THE TRAINING OF TEACHERS

This raises the whole question of the proper training for secondary teachers. We have found in our discussion of the legal status of high schools<sup>1</sup> that only a few of the states make any definite provision for the special certification of high school teachers. In a great majority of the states, while the laws require certification of competency to teach, yet the spirit of the law is ignored in the case of high school teachers. It frequently happens, therefore, that the legal qualifications provided for by certification bear little or no relationship to the real qualifications sought in teachers of high school grades. This condition of things doubtless grows out of the fact that most states in their legal enactments fail to distinguish the high school from other departments of the common school system.

As a result of this condition a number of educational organizations have gone on record as undertaking to define the qualifications to be required of those who are employed to teach in secondary schools.<sup>2</sup> The issuing of certificates by state departments has been used as a remedy to some extent; but it easily becomes apparent that mere examination tests cannot be made an equivalent for a proper system of training. There will always be many who will pass fair examinations by cramming for them,

<sup>1</sup> Cf. Chapter II. See also Bolton in *School Review*, 15 : 97-122.

<sup>2</sup> See Rules for the uniform accrediting of High Schools by the North Central Association of Colleges and Secondary Schools. Also Report of the Committee of Seventeen, N. E. A. Proceedings, 1907, pp. 523-668.

while in reality possessing little of that logically ordered mental ability and power of presentation so essential in the teacher. All of the states, through the establishment of normal schools or through educational departments in universities, or both, have recognized the necessity for the professional training of teachers. But not all educators agree as to what particular kind of training is best for the preparation of secondary teachers. Just at the present time there is a growing tendency on the part of school authorities, probably aided somewhat by prescriptions set by colleges and universities, to employ as high school teachers only those who are graduates of creditable colleges. At the same time the great universities are seeking stronger organization of their facilities for the training of such teachers.

This tendency is opposed by some of the normal schools. They profess to agree with the universities that higher scholarship should be required of secondary teachers than that which has usually been required for the granting of a normal school diploma. Their chief contention is in regard to the professional training. This, they hold, is the province of the normal school and not of the university. They maintain that the universities, by their very nature, can never impart that professional spirit held to be an important factor in teaching success, and which the great normal schools claim as their chief glory. The radical adherents to this normal school point of view believe that they should be permitted to duplicate the necessary collegiate work for those of their students who would prepare for school supervision or for teaching in high schools.

The universities contend that this is not feasible; and they would characterize such a course on the part of the state as lacking in both logic and economy. They point

out that this is only one phase of technical training which universities are bound to offer if they are to fulfill their function in the state. They emphasize the fact that the problem of training teachers, when we include teachers in normal schools, colleges, and other technical schools, is altogether too large for the normal schools alone to undertake without themselves duplicating the universities entirely. In some cases compromise has been sought along certain lines. This is notably true in California, where certain concessions are made by the university with regard to normal-trained people who seek secondary teachers' certificates.

If all teaching were put upon a basis of professional training, the normal schools would be compelled by the limitation of numbers to confine their activities to the training of elementary teachers and leave the problem of the training of secondary and college teachers to the colleges and universities. It is not to be forgotten, however, that for the present the universities are hardly prepared for this service. Nowhere in the country is there, as yet, a department or school or college of education in a university which can offer for the training of secondary teachers, including the imparting of a professional spirit, any such adequate preparation as is given by our best normal schools to elementary teachers. Nothing short of a school or college of education with a distinct enrollment and faculty and with some kind of provision for practice teaching or cadet service will enable the universities to meet this problem. All things considered, no other institution is so well qualified in other respects to undertake the work. Indeed, it may be said that it is one of the most fundamental services to society which universities may be expected to render. Perhaps a fairer view of this whole matter would be ex-

pressed in that conception of the university of a state which would include the normal schools as technical departments on a par with agriculture, engineering, etc. Such an organization in a state might settle the whole controversy without loss to any and with profit to all.

## VI. THEIR TRAINING IN SERVICE

But whether high school teachers are trained in one institution or another, such training does not do away with the necessity for further effort on their part toward professional attainments. The nature of the teacher's work demands constant effort to fight off paralysis of all powers except those employed in the routine of school duties.<sup>1</sup> To provide against such paralysis various professional organizations have been perfected. No scheme for instructional organization in a high school is complete which does not in some way provide for the continuation of the individual teacher's development. First of all this development should be along professional lines. There is little to be hoped for from the normal school or college graduate who concludes that all his professional training has been provided for, and that nothing remains to be done but to find a position and enter serenely upon the duties of the teacher's life.

In the pioneer days of our educational system the general teachers' meeting was devised as the best means of providing for professional advancement. This, however, has grown into what is often a mere emotional demonstration with the great body of teachers as passive recipients, until getting an educational "inspiration" has gone through all conscious stages of voluntary action and settled down

<sup>1</sup> See Cooley, N. E. A. Proceedings, 1907, pp. 94-103; also Van Sickle, 50th An. Vol. N. E. A., 1906, pp. 177-183.

into a mere habit. As a result most of our well-trained high school teachers attend such gatherings only under compulsion. They prefer such special groups as associations of teachers of science, history, modern languages, manual arts, business, etc. This often brings high school teachers and college instructors and professors into the same group, which is more as it should be; for each should have something to give to the other in such a discussion of a common subject from the differing viewpoints of those approaching it at different levels.

But the social and cultural side of the teacher's life often presents even more imperative demands for attention. This is only partially and poorly provided for in any educational meeting. The case calls for the broadening influence of contact with people of other interests, of other points of view. Shopworn goods are invariably marked down. Teachers, of all others, should avoid this fate; yet to avoid it means to set their strength against a strong, almost irresistible current. Is a teachers' club proposed for the social advantage of its members? If such activity is to be confined to but one organization, seek, rather, membership in a club more cosmopolitan. Is a broader culture to be sought? Attach yourself to some interest foreign to the school, if possible. Travel with people of the world rather than with pedagogical excursionists. Take an interest in some art or craft or line of reading which will not permit the mind to hark back continuously to the schoolroom and its problems. This is facing westward to find the East. The outcome will be the East ultimately, of course; but in finding it you have seen the West as well, and are by so much the richer for it.

## VIT. COMPENSATION AND TENURE

If the schools are to command the services of teachers trained as suggested above, there must be considerable change in at least two important respects. There must be a fairer compensation for the service rendered, and the tenure of the teacher must be made more certain. On the theory that service should receive compensation that is commensurate with what it adds to the material wealth and to the security of the people the teacher is not yet receiving his share of the increase. As a result our better trained men and women are seeking other fields and the supply of trained teachers is becoming yearly more and more inadequate. This condition is aggravated by the uncertainty of remaining employed. There is apparently no good reason, setting aside tradition, why a teacher who has taken up the work as his chosen profession after thorough preparation, and who has shown his ability to instruct in an approved manner, should not be permanently employed rather than subjected to the uncertainties of annual re-appointment.

On this matter of tenure the high school teacher is actually better off than any other group aside from principals and superintendents of schools. Statistician C. H. Verrill derives a number of interesting generalizations from the report of the N. E. A. Committee on Salaries, Tenure, and Pensions of Public School Teachers in the United States.<sup>1</sup> Among other things he is able to show that in 333 cities with populations of 8000 or over the average duration of service of all teachers was found to be  $11\frac{1}{2}$  years. As only about  $8\frac{1}{2}$  per cent of the teachers included were high school teachers, and as a much larger proportion of these are men

<sup>1</sup> See pp. 459-464 of that report.

than in the case of teachers in the elementary schools, we may reasonably conclude, in the absence of more specific data, that the average tenure for high school teachers would be appreciably higher. While this is not so bad as in the case of the vast majority of elementary school teachers, yet it would seem to be altogether too low. If we are to insist upon the high standards of preparation which competent service on the part of the teacher demands, we should also seek to secure for him permanency of appointment on conditions similar to those commonly prevailing in college and university service.

The matter of tenure itself is, however, as Mr. Verrill points out (p. 459 of same report), largely dependent upon the matter of salaries. Teachers are not likely to seek permanency of appointment if this cannot mean a compensation, after a reasonable term of service, that is commensurate with the demands of "appropriate standards of living." Nor can this problem as related to the high school teacher disentangle itself entirely from the corresponding problem for elementary teachers. The school public in the United States is not yet sufficiently discriminating in regard to differences in standards involved in the training required by these respective groups of teachers to deal fairly with it. As long as professional standards are too low for the elementary group, therefore, there is sure to be an adverse influence toward better salaries and longer tenure that will be felt by all groups, including high school teachers.

The inadequacy of salaries is too well known to need a detailed presentation here. The National Education Association has done a great service in collecting through its committee the materials set forth in the report above referred to. The fundamental question demanding solution

before any very satisfactory readjustment of salaries can be reached involves the whole matter of the means employed in financing our system of public education. Here again the National Association has taken forethought in providing for the collection of much valuable information concerning taxation as related to the problems of public education.<sup>1</sup> Such materials will doubtless be needed for further study in future attempts to get at the roots of the whole matter. We have already pointed out, under the discussion of the legal status of high schools, the various attempts which different states have made toward a more satisfactory and equitable means of maintaining our high schools. Is not this, after all, the fundamental thing next to which, and as its logical offset, comes the absolute requirement of a higher qualification standard for high school teachers? Back of this, and underlying the problem of betterment of the elementary school there may be, and doubtless are, needs of readjustment of our entire general revenue scheme; but so far as the high schools are concerned the first thing is to determine who, of right, should maintain them.

There is, however, another phase of the salary question which demands consideration as a factor in administration: On what basis are we to determine salary promotions of high school teachers? In the first place the movement by several states leading to the fixing by law of the teachers' minimum wage seems unfortunate, although it doubtless has given temporary relief in some cases. The local conditions must determine to some extent what interpretation is to be given to the phrase "appropriate standards of living"; and if so, then these same local conditions must help to determine the minimum pay. As has already been

<sup>1</sup> See Report of Committee of N. E. A., 1905, on Taxation as Related to Public Education.

suggested, the standards of preparation demanded must enter into the problem of minimums. Then the ideals of the community as regards the social standing and duties of the teacher, as well as the expectations of administrative officers in regard to the nature and amount of effort to be put forth by the teacher for self-improvement in a professional way, also have weight in this matter.

When once the base line of salaries has been established for a given high school or group of schools, what is to be the basis for increase in salary, and what the maximum limit? The latter point will be disposed of with the interpretation given to "appropriate standards of living," including, of course, the maintenance and education of a family, and also a reasonable provision for the future. The remaining considerations which may fairly be expected to bring an increase in salary are:—

(1) Increased efficiency due to service. This will not extend over the entire period of a normal life of service, perhaps, although it will vary greatly with individuals, and its duration will depend on the next factor to be considered.

(2) Increased efficiency due to further study and investigation along the lines of professional work or along contributory lines. The possibilities for increased efficiency in this direction will depend chiefly on (a) native ability and (b) thoroughness of first preparation. It is evident that in this respect high school teachers would come under a class different from that of elementary teachers. Who is to say what the upper limit is to be to the value of the services of those who thus become great in their particular spheres? What puts a limit to the compensation for the genius of a great lawyer, a great physician, a great financier, or captain of industry? It is evident that when

we speak of a maximum limit, we are thinking of the teacher in a class by himself, as different from other men!

(3) There may arise the consideration of certain conditions of supply and demand, more or less variable, as a further factor in determining increase of salary. It would seem just that some leeway should always exist in the authoritative adjustment of teachers' salaries to permit the consideration of such an economic contingency.

But what are we to say with regard to the sex factor? Should it be a real factor in the adjustment of high school salaries? This is a question involving some careful discrimination of judgment if it is to be treated with fairness and candor. In the first place it is fair to say that the third point mentioned above as having to do with salary increase must, to a certain extent, have consideration here. The rapid increase in the number of women graduating from our colleges and universities, taken in connection with the fact that the field for independent service by educated women is rather circumscribed, naturally produces an economic situation of relative oversupply. This, however, may be disposed of as only a temporary condition. The real answer to the questions just raised lies deeper.

The question sums itself up as a matter of ultimate purpose on the part of the woman who teaches. If she has put into her preparation the same mental power and capability as the man, with no wavering as to ultimate purpose to vitiate this effort, and if she enters upon the work of teaching possessed of an ability the equivalent of the man's ability and with steadfastness of aim, how can there be any question of difference as to compensation except such a possible economic difference as suggested above? "But," says some one, "do you mean that every woman who teaches should take the vow of a celibate?" This

does not follow. It is readily conceivable that any woman may enter upon the life of a teacher in the spirit described above without abridging her freedom to act in the light of future and unforeseen emergencies.

On the other hand, when women assume the rôle of teaching merely as a transition stage, as hundreds do, and with no strong purpose running back into the years of their preparation, then there are most decided grounds for difference as to the salaries they should command. Furthermore, as long as there may be any considerable number of this latter class, they will naturally tend to hold down the salaries of all women who teach, and, to a certain extent, of all teachers, male or female.

If this is the correct analysis of the points at issue in the sex phase of the problem of salaries, then the women of New York City, in asking for legislation that would enable them to command salaries equal to those of men where equal service was rendered, must have acted without due consideration of all the conditions.

### VIII. PENSIONS

The subject of teachers' pensions may be dismissed with a very brief statement. The suggestion of it is another way of saying that salaries are inadequate. The remedy should be aimed at the root of the difficulty. The only possible ground for argument in its favor rests in the assumption that teachers as a class are improvident. There is good reason to believe that the facts are quite to the contrary. It is probably true that teachers are frequently failures at any independent business venture. They have devoted all their strength to the work of their profession. Men who can succeed equally well in any two great fields of human endeavor at the same time are exceedingly rare.

What teachers probably need more than pensions is some organization through which they might find a way for the safe and profitable investment of their necessarily scant savings without becoming a prey to the robberies frequently carried on under the guise of successful business practice.

## IX. SELECTION AND NOMINATION OF TEACHERS

One of the most difficult problems connected with the administration of a high school is the selecting and nominating of suitable teachers when vacancies occur. This calls for great care and good judgment. Aside from the difficulty in deciding just what qualities of person and preparation shall determine the choice, there are several other things which enter into the consideration. In the first place the question of salary is to be met. Probably the majority of school boards are either unwilling or unable to pay the price which a well-trained and successful teacher should command; yet these are both important considerations. General testimonials in the hands of candidates must usually be taken with a grain of allowance even by one who knows how to read them in a way to get the force of omissions as well as of the good things said concerning the bearer. Nothing short of a careful investigation by the board or by the superintendent ought to be taken as a basis for employment. Yet in the majority of cases little time is usually given for such investigation.

When it comes to the consideration of graduates of institutions, it is safe to conclude that these institutions may be consulted through committees or secretaries appointed to look after all calls for teachers and to give to school authorities a full statement of the qualifications of any candidate under consideration so far as these are known to

the committees. Where such is the case, it is reasonable to suppose that a safer estimate of the teaching ability of a candidate may be had from such committees or secretaries than from almost any other source.

The teachers' agency is another well-known means now available for help in finding suitable candidates to fill vacancies in the teaching ranks of a school. The number of these agencies has greatly increased within the past few years. Like most business enterprises, this agency work has been undertaken by all kinds of people. Until quite recently nothing has been said as to the desirability of placing any special legal restriction upon the business. As a result some very unscrupulous practices have grown up so that one is hardly safe in consulting an agency unless it is vouched for by reliable parties who know its standing.

There is no doubt but that a good agency may prove very helpful to school authorities in finding suitable candidates. The usual plan adopted by agencies, however, of sending in a long list of applicants for a single vacancy is deplorable from every point of view. It is hardly fair to the candidates, it creates a false impression as to the supply of available teachers, and as a natural result arouses a feeling of distrust towards all agencies in the minds of school authorities and candidates. There are a few good agencies which try to avoid such practices. These may usually be consulted with safety and with some prospect of getting at what is wanted if any candidate is available.

## X. THE PRINCIPAL

Having now discussed the general features of the problem which the organization of the instructional work presents, we may conclude this presentation of the subject by summing up the character and function of the instructional

corps as a whole. Given the high school with its principal and teachers just as they are, with all their capabilities and limitations as men and women, and with the rules and laws of the average community and of the average state, what ought we to expect of them? How ought they to act?

In the first place it is granted, of course, that the principal is responsible to the superintendent, and through him to the board, for the wise and successful administration of the school. It is he who is to direct all the internal workings of the school and to stand for it before the patrons under the rules of the board as interpreted by the superintendent. He is expected to have an ideal toward which his school is developing. This ideal is expected to be in harmony not only with the general educational policy of the district, but also with the best thought in regard to the training of youth. He is expected to make recommendations in regard to rules for the government of the school, of text-books to be selected, of apparatus, reference books, and supplies to be provided, of changes in the program of studies; and usually, except in small schools, he makes recommendations of teachers to be appointed. He is responsible for the proper adjustment of the material and sanitary conditions of the building within the limitations of its construction and of the rulings of the board; for the adjustment of difficulties among the pupils, or between teacher and pupil; for the satisfaction of complaints by patrons when coming directly to him and within his jurisdiction, or when requested to do so by the superintendent. He is to see carefully to the keeping of all proper and necessary records of the school, and to keep in close touch and communication with the superintendent, consulting his interests in the larger problems of the schools as touching the high school, and advising freely with him

in regard to all plans and policies of importance connected with the management of the high school.

His most important function, however, is in his direct relationship to his teachers, and, both directly and through the teachers, his relationship to the pupils and to the school life as a whole. In most of the matters, for instance, which have just been mentioned as belonging to the office of principal, he will naturally consult the interests of the teachers in so far as these things may affect the teachers and the success of their work. He will seek their advice and coöperation in all important questions of policy relating to the discipline of the school. He will protect the interests of the teachers to the extent that such protection is due and within his province, in all matters pertaining to their material and physical well-being, their professional and social interests and advancement. He will interest himself, in a sincere and sympathetic spirit, with the peculiar problems of each teacher's sphere of work. To this end he will familiarize himself with their work by observing their instruction and by advising with them concerning their plans, their hopes, their difficulties. He will counsel, admonish, warn, commend, and vindicate them and their work, as occasion requires and in the same spirit of sincerity and sympathy. He should stand before his school as one fully conscious of the gravity of his relationship, yet saved by an optimistic spirit, a fine sense of humor, and well-preserved physical health, from any depressing effect on that account.

## XI. THE DEPARTMENTAL HEAD

We have spoken here of the principal in direct relationship to the teachers and as becoming familiar with their work. It is just here, perhaps, that high school or-

ganization has most frequently failed. Writers on school management usually close their discussions on the relationship of principal to teachers when they get as far as the eighth grade. On the other hand, college instructors and college-trained high school teachers conceive of high school organization in terms of college organization. Earlier in this chapter it was pointed out that the departmental plan of organization should prevail. It does not follow that "department" in a high school should mean the same that it does in the college or university. The passing from the mixed group of the elementary school should be more gradual, the approach toward the specialization of the college should be through a larger grouping of subjects more or less closely related.

Therefore, in this intermediate stage of high school organization should come the departmental head. He is the one who can come close to the teachers dealing with a certain outlook on the educative processes of the secondary stage. If it be in science he thinks primarily of the mental attitude to be developed in the pupil rather than the production of an embryo investigator in some circumscribed field of science. To such a departmental head, having the oversight of all the science work of the high school and its relations and applications to other high school activities, the leading interest will not be to push a class in chemistry or biology. He will be concerned chiefly in having the work in either of these lines so presented in its individuality and in its relationships as to make it contribute directly and effectively to the training of mind into the scientific habit or attitude.

So in the language work modern languages, including English or all foreign language work, may form a departmental group to be presided over by a head teacher with

sufficient breadth of training and outlook to see that the best possible results accrue to the pupils through the organized, coöperative work of the various individual teachers under his special leadership.

It is only by some such broad scheme of departmental organization that we shall be able to correct the present tendency to over-specialization on the part of high school teachers. In accomplishing this result we have a right to expect the hearty coöperation of colleges and universities in the planning of courses for those who are to teach. The neglect or oversight of these institutions as to the real interests of secondary education is too gross to be even excusable.

Perhaps nowhere are the results of this sin of omission more seriously felt than in the smaller high schools. It is here that a large proportion of our high school teachers are required; and yet to these schools there go out annually from our colleges and universities hundreds of inexperienced graduates, many of whom have a teaching knowledge of only one subject where they should be prepared in at least three.

## XII. THE TEACHER

To all the conditions of organization set forth above, whether those relating to the principal or to the head teacher of the department, the teachers, each teacher, will respond in a spirit of coöperation and cheerful acquiescence, if worthy the position of teacher. Each will seek to understand and enter into the aims and spirit of the organization in order that together teachers, head teachers, and principal may work toward the ideal set up for their attainment. There will be freedom of discussion and expression of views when they counsel together; but when

once a course of action, a policy, is decided upon, they will work together for its accomplishment. They will do team work; and they will share together the struggle of severe conflict, the exultation over victory, and the pain of defeat.

The result of such a spirit upon the school as a whole is inevitable. If discordant elements have existed, they will be eliminated; the spirit of helpfulness, of coöperation, of loyalty to the school, will become contagious. Mistakes will occur, there will be things to explain, to condone, to regret; but the work and life of the school as a whole will tend steadily towards orderliness, homogeneity, permanency.

Given a principal and teachers properly qualified in other respects, with a sane and effective scheme of organization and working thus with unity of purpose; given a proper motive for the work of the school and for the differing types of pupils in it; given a worthy ideal for the life of the school as a whole, — and there is no other one social factor which is so far-reaching and so stimulating in its uplift to the community as is the modern high school. And this is no idle dream. It is realized to-day, even at this imperfect stage of its organization, in some hundreds of American communities.

#### PROBLEMS SUGGESTED FOR FURTHER INVESTIGATION

1. An investigation with a view to ascertaining the general nature of the rules adopted by boards for the government of high schools.
2. A study of the status of the high school principal in his relationship to the superintendent of schools.
3. An inquiry into the extent to which three-teacher high schools are departmental in their plan of instruction.
4. A study of the heuristic method and the extent of its use in high schools, with results.
5. An examination into the social status of high school teachers in the United States.

6. Tenure of position by high school teachers.

7. To what extent are salaries of high school teachers affected by those who purposely make teaching a temporary occupation?

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## CHAPTER VII

### THE PROGRAM OF STUDIES

IN the first chapter we have noted some of the tendencies which a brief historical review of the programs of secondary schools reveals. We have seen that secondary schools have responded to social needs as these have appeared. Indeed, we may almost say that the development of secondary education is a fair index of the shifting demands of our social evolution. This is true because of the fact that it is here in the middle school that first the need is felt of some sort of specialized training.

#### I. DETERMINING CONDITIONS

Unlike the period of elementary education the age of pubescence brings with it a widening social interest and a desire to choose a calling. This is due largely to the development of sex instincts and the consequent wider outlook on life and its social relations. Naturally the youth seeks in his experiences a response to the growing sense of the prospect of a larger participation in this life. He begins to catch glimpses of the approach of responsibilities which he must prepare to meet. He grows distrustful of any education that does not promise this preparation. Unlike the elementary child he is no longer satisfied to take his education entirely on faith. He wants to know the value of what he is getting in the light of the vision of his life that is to be. It is not necessarily to be implied

that on this account we are to undertake, at this period, to train specialists; but that we are to differentiate the possible curriculum of the individual more to the end that it may serve both as a means of testing his ability along a given line and also as a suitable foundation for future specialization either in the work of life or in the university. In the light of present tendencies, as well as in the light of the apparent and probable social needs to which secondary education should minister, we shall now undertake a more detailed discussion of the program of studies. In doing this we must assume that the elementary schools are able to turn pupils over to the high schools with at least as much preparation as has been suggested in Chapter III.

## II. BASIS FOR CLASSIFICATION INTO COURSES

The first question which presents itself at this point is: On what basis shall we classify the courses of the program so as best to enable us to preserve a balanced condition as to the training it offers? The ordinary laity, as well as some of the profession, insist on grouping subjects as either practical or cultural. In making this classification there is evidently the thought that certain lines of school training bear a direct relationship to preparation for the duties of life, while others bear little or no such relationship. As a rule this class would put the emphasis on those subjects which they consider practical, to the limitation or exclusion of such subjects as are not readily associated by them with the practical standards set up.

Such a view of the educational process would, if dominant, be likely to omit from the training of youth much of that which goes to make the historic races what they are in the development of the world and of mankind. It is

quite essential that the young should be taught the more fundamental arts of living; but it is no less so that they should know something of the relationships, the responsibilities, and the uplifting influences of the social group to which they belong.

Another classification of the materials of secondary education may be called the traditional one. This has come to us out of the educational history of the past. The grouping in this case has reference more particularly to the origin of the materials which the various subjects represent. Such a classification would give us the humanities, or all those subjects, as language, literature, art, and history, springing from human associations and activities; the natural sciences, or physical science, biology, and earth science; political science and economics, having to do with governments, and with industrial relations and activities and finance. This is a very interesting and helpful grouping, and one that we need to preserve for both its historical and its scientific value.

A more modern view of education, however, as we have seen in a preceding chapter, takes quite a different basis for the classification of educational subjects. This point of view assumes, in the first place, that education is much more a matter of growth and training than imparting information. It asks first, then, What are the results to be desired in the training of youth? and, second, What will be the probable effect of a given line of work or grouping of subjects toward bringing about these desired results?

The procedure must then be from a psychological point of view, on the one hand, and from the point of view of adjustment to environment, or the sociological point of view, on the other. If the humanities are to be considered, they must be put to the test chiefly as to the rela-

tionship they are to bear to the mental experiences of the adolescent in the process of his mental evolution. Here the method, even, is to be put to the test. The youth is to be socialized; what particular application of the humanities, and in what relationship to other lines of experience, will best do it? He is to be trained to alertness in acquiring and comparing data, and in determining between fact and probability; what is science training, combined with training in other lines, to have to do with the accomplishment of such a purpose? He is to be prepared to play his part as a citizen, as a factor in the business and industrial affairs of life; what economic training, including direct contact with material things, and the sympathetic training of actual participation in industry, will best make him ready to act his part?

Not merely the cultural or practical, certainly not the merely traditional, is longer to be preferred, then. When once the desired adjustment is understood; when once we have gained some knowledge of the causal relations of what we are pleased to consider the materials of education to the development process in youth and to the attainment of educational ideals, then this understanding and this knowledge shall furnish us with the real science of secondary education. We shall no longer have to grope about for a basis on which to adjust our program of studies. Some little headway has already been made toward such an end. The knowledge gained is mostly empirical, to be sure; but it is not to be despised. Even with the imperfect knowledge now in our possession of the principles involved in a psychological classification of the materials of education, we are probably safer to proceed on such a basis than we would be to rely solely upon the popular or traditional conceptions.

### III. ELEMENTS INVOLVED IN THE PROGRAM

With this understanding of the limitations which confront us, we may now proceed to a more definite consideration of the elements involved in the secondary program.

In his report for 1894-1895 the late Superintendent Soldan, of St. Louis, expresses a very fundamental principle with reference to the classification of the materials of education. He says, "Assimilation and activity, or receptivity and spontaneity, are two poles round which the world of the school must revolve." Here is a definite statement of the differing content of the two hemispheres of the educational process which we have spoken of in another chapter as stimulation and reaction. This furnishes us a basis for the most general as well as fundamental grouping. Whatever is capable of being received and assimilated by the mind of youth, to become a part of that which impels to action or to spontaneous expression of some sort, or which serves as a basis for future conduct, will go into one group of materials. Whatever will give conventional ease and skill in action or expression along the lines of the manifold needs of mankind, as now situated in history and in nature, will belong to the second group.

As we have found that in the elementary stage of education progress comes through a pretty close correlation of stimulation and reaction, so in the secondary stage we may expect the best results in the acquiring of arts by continuing this correlation. The necessity will soon appear, however, for a tendency toward isolation. More and more, as the student progresses, will his desire center in the cultivation of the art for its own sake, on the one hand, and, on the other, to the development of systems of thought reaching forward into the realms of speculation.

Viewed in this way there is no ready-made line of distinct division separating the ordinary subjects taught in the high schools into two such groups. There is, however, a classification sufficient for practical purposes. It is easy to see, for instance, that the materials for stimulation, or reception and assimilation, are to be found in the fields of nature and of history, using this latter term again in its broader sense. But the group of subjects which will correspond to training in action or expression is not at all clearly defined. In practically every phase of them we find a merging into the field of stimulative or impressional materials.

This amounts to saying that each particular type of expressional activity has, out of the very process of its development, accumulated a mass of historical or scientific materials, or both. Take, for instance, language; the teaching of the mother tongue or of a foreign language will soon lead to the grammar and the literature of the language,—the one a science, the other an art, which have sprung from use in expression. Drawing and color work lead directly up to the historical study of art in these particular fields. Mathematics will be found to have much of interest in the realm of history as well as a strong footing in the field of science. Constructive work becomes immediately connected with history on the one hand, as a basis for interpretation, and with science on the other hand, which must be constantly applied in the accomplishment of desired results. Its more or less direct relationship to art, especially decorative art, is also readily apparent. So, also, music, from being a training to the expression, through harmony, of the finer or deeper feelings and emotions, passes over into the realm of an art whose masterpieces are to be studied, and whose history is to be read.

## IV. EACH COURSE DEFINED: HISTORY

We shall not be confused, therefore, when we speak of the impressional or stimulative subjects, and the expressional subjects which make up the various courses of the high school program. Under impressional subjects we may first consider the historical or sociological group. The subjects belonging most distinctively to this group are history, including ancient, mediæval, and modern; civics; economics, beginning with economic history or geography, and passing into an elementary study of the theories and principles involved in the production of wealth and in industrial relations. Secondarily would be included the historical aspects of such art phases as literature, architecture, painting, sculpture, decorative work, music; and the historical phases of all arts and sciences. What are the reasons, in the light of modern ideas of education, for including this group in the secondary program? First of all, in the process of adjustment to his environment, the individual needs to know what his present situation is historically. In order to be able to comprehend the institutions, the social movements and tendencies about him, man must know something of the history of these things. Adjustment to environment is not to be a mere passive relationship. Men are still reacting upon each other and upon their institutions. In order to participate intelligently in this reforming process they must know something of the doctrines and the theories concerning organized society which history shows to be either partially or utterly false, or potentially if not actively true.

Incidentally, if the work along these lines is well conducted, the knowledge acquired of his own institutions as seen in comparison with those of the past will develop in

the youth that interest in and love for these institutions which is the only sure ground for honest patriotism. The process of training should also lead to such habits of careful weighing of evidence as will foster a sincere devotion to truth.

While this more specific training is being given, the mental powers are also being benefited. On the side of intellect the memory, the constructive imagination, and the power of reasoning inductively are being strengthened. At the same time the ethical judgment is constantly stimulated, while some of the criteria, at least, for sound æsthetic judgment are being acquired.

If the work of the elementary school has been well done, the youth will come to his high school training with a fairly clear notion of historical perspective. He will have acquired means of interpreting historical records in his contact with and study of the elements of society about him. He will also be fairly familiar with the great names of history and something of what they stand for; and he will have at his command the more elementary arts of the school. What may we best offer him, and in what order, in his secondary training?

We are limited as to time. Probably three years, at most, may be given to this subject by the individual. If he is to find his present place in history, it would seem as though he must trace the main currents of sequence; yet he may not grasp the whole sweep of history. This is the dream of those who advocate a course in general history; but the number of such advocates is rapidly diminishing. The history that will contribute most to an understanding of our own institutional life is that of Greece, Rome, and England, followed by a careful study of the colonial and constitutional periods of our own history. Somewhere in

the three years should come the history of the leading arts, especially of literature; the development of the science of government as found in this country, and the more fundamental principles of economics, given, as far as possible, in the light of the history from which, chiefly, they have been deduced. If a fourth year is to be offered, it may well be a course in mediæval and modern European history.

It is probably true that as far as these courses themselves are concerned it makes little difference as to the order of sequence. If each one is presented in a manner to correspond to the capacity of the class, it will make little difference where we begin. But if we are to have in mind chiefly the finding of his present place in history, the youth will probably find his way easier if he begins nearest the source and follows the stream, in its broadening sweep, down to modern times and his own nation. Such a sequence will also aid greatly in the study and interpretation of literature. A further consideration, if needed, will appear in the fact that the study of such abstractions from history as political and economic sciences will naturally need a strong and rather complete historical background.

First, then, would come the course in ancient history in the first or second year of the program. Such a placing of this course makes it impracticable to shorten the ancient history to less than a year, as some now advocate. Pupils are too immature at this time in their course to be expected to get hold of the institutional development and the causes of weakness and decay among Greeks and Romans in less than a year's time.

Further, it is a notable fact that the histories of Greece and Rome furnish us with the only national types in any direct way related to our own, and which at the same time

present life histories in practically complete cycles. Their achievements thus become ultimate products of their existence as nations; and the chain of sequences springing from their origin, nationally, rising to the zenith of their greatness, and sweeping on to their decay and legacy, is fairly well defined and traceable.

If three years are to be offered, then a year of English history may follow in the third year of the course. For smaller high schools, at least, this may well include the history of the literature of the English people. If supplemented by numerous themes based on the history, and by some outside reading of historical classics, this will satisfactorily replace any regular English work for the third year, and thus leave more time for other matters. There will still be time for the skillful teacher to take such excursions into the related history of continental Europe as to leave little that is essential to the development of such European institutions as are at all contributory to our present conditions.

This will leave the fourth year for a course in American history paralleled by courses in the elements of civics and economics. If the fourth course is to be introduced, the ancient history would naturally be confined to the first year, followed by the history of mediæval and modern Europe in the second year. It would seem desirable that considerable of the extra time thus allotted to the sociological group of courses should be given to a fuller study of the elements of civics and economics as furnishing the materials of history most vitally related to the individual's environment, both politically and industrially. Whatever may be the amount of work in these latter lines provided for in the program, a brief course in commercial or industrial geography should be given as a preliminary to it. In

any case, all pupils should be advised to take at least three years of sociological work.

A very important test of the efficiency of the work in historical subjects will be found in the inclination of the students who have completed their high school courses toward the further reading and study of history. No such thing as high grades in scholarship can ever condone the lack of this inclination.

## V. SCIENCE

The second consideration having regard to the individual's relationship to his environment is to be found in nature. In secondary work this gives us the natural sciences. For the nature and properties of matter and the forces which are manifested in and through matter the courses usually offered are physics and chemistry. For the nature and properties of life, and how it is operative, through plants and animals, the biological sciences are presented. For the earth as the abode of plants, animals, and man, its surface conditions, its drainage, its atmosphere, and its place in the solar system, the study of geography is included. All this again is impressional work, well calculated to stimulate thought and feeling in the mind of youth. Nature, with her sublime forces, has ever been man's first and greatest teacher. Here are the things elemental which take the mind away from self and make it possible to conceive of truth or discover error impersonally. The great difference between this field and that of history, as furnishing stimulative material in education, lies in the fact that this is elemental, pure, and unmixed with the personal element; while historical matter, by its nature, carries with it the conventional, the traditional, — that which has been impressed upon the

individual from infancy through contact with more mature minds. Then there are nature's infallible laws as opposed to the devious tendencies of historical movement. Evidently, no special method of treatment of historical materials can be made to serve the same purpose in the training of youth as wisely directed work in natural science.

It is easy to see that here again the purpose is not to cover the entire field of scientific knowledge. Some knowledge other than that to be acquired through his own investigations must certainly be given the youthful student; but this should be so managed as not to impair the real purpose of this particular element of training. What we should seek to accomplish is to preserve the open-minded attitude of the individual with regard to the further revelation of truth through nature as well as through human experience. To do this we must seek to secure and preserve the first contact of mind with nature in all her unconventional simplicity and purity. We would not be understood as underestimating the place of authority in education. The trouble is that we are prone to rely too exclusively upon what others have done or said to the neglect of that training which gives independence and initiative in both thought and experimentation. There are those who make of the natural sciences but another phase of historical training, teaching dogmatically the often imperfect products of human thought with regard to nature's processes in matter or force or life. It is the attitude of mind through training that is the fundamental thing. Demonstrated final truths in the realm of nature are, after all, but few, comparatively, and easily acquired, if only the mind is alert. Of all things the bookish habit needs to be avoided here.

Again, as in the case of the sociological courses, our

starting point must be determined by the things accomplished in the elementary school. If, as has been suggested by the Committee of Ten, the pupils have acquired the ability to "record, classify, and reflect" on the results of their contact with nature, the way will be open enough for the beginnings of secondary science. As a matter of fact, however, it appears that some time must elapse before such results may be expected. For this reason it seems almost imperative that a course in general elementary nature work should introduce any attempt at high school science work. This course should acquaint the student with the more common phenomena in nature due to the operation of physical and biological laws on matter. There would be something of physics and chemistry, though nameless as such, something of geology and meteorology, and some of the more general aspects of botany and zoölogy, as all these things mingle in the everyday natural environment. The first half year would suffice, and the work might all come under the title of geography or physiography.<sup>1</sup>

As to the sequence of the biological and physical sciences, much must depend upon the nature of the subjects themselves. Biology brings the student into more direct, easy, and continuous contact with nature. It is the more primitive science. For this reason it may well precede the physical sciences which are, perhaps, more inseparably connected with the arts of man. If the preliminary nature work has been well done, it would seem the logical thing to begin with botany, as this field of nature connects itself more palpably with the earth and the atmosphere. Zoöl-

<sup>1</sup> A very interesting course of this kind is given in the Oak Park, Illinois, high school. This course runs, on half time, through the first year, and is made a prerequisite to all other science work. It is a composite of certain elements from physics, chemistry, physiology, and botany.

ogy and human physiology would follow. The physical sciences might well be given as parallel courses covering two years; or they may come in as separate courses, probably with chemistry preceding, and physics, coördinated with mathematics, completing the program of science courses. Where an elementary course in nature work or geography has been given, the earth science proper may well continue through an entire year in the latter half of the high school program.

For a small high school, unable to offer all the science courses, the following program will be found to be both logical and effective:—

*First or second year:* physiography and botany carried as parallel courses, or at least partially so.

*Second or third year:* zoölogy and human physiology blended into each other with no definite limit as to time except that zoölogy shall receive at least half the attention.

*Fourth year:* physics.

For a fully organized and equipped secondary school whose students come with the preparation of a good, modern elementary course, the following program of natural science work is suggested:—

*First year:* botany.

*Second year:* zoölogy, including human physiology; or a choice between zoölogy and physiology for a full year's work.

*Third year:* physiography or chemistry for a full year.

*Third and fourth years:* physics, or physics and chemistry.

## VI. LANGUAGES, INCLUDING ENGLISH AND FOREIGN

The remaining subjects of the program may readily be classed as expressional, although by no means exclusively so. We have found that in the elementary school what are known as the school arts — reading, writing, language,

drawing, number work, constructive work—are almost purely expressional. While we speak of these as being acquired in the years given to elementary training, yet there is a sense in which training in school arts is to pass over into the high school. The language work will here involve a fuller mastery of the art of expression in both reading and composition; it will also include the mastery of the vocabulary and sentence structure of whatever foreign language may be undertaken.

The mathematics work in the expressional sense will require that the student master new systems of symbols and their use in making computations.

The drawing and art work will still demand close attention to the use of media as well as the acquisition of skill of hand in expression. So, likewise, with music, constructive work in wood or iron, or any technical training, such as business courses, household science, etc. But, as has already been pointed out, all these activities will enter more or less into history, directly or through art and economic relations, or into science. A discussion of these groups more in detail will serve to reveal to us the part each subject is to play in the real process of secondary training.

First of all is language, and of this quite the most fundamental is the mother tongue. New words are constantly coming into the youth's vocabulary, and the formal expression or spelling of these must be mastered. This work will occur incidentally as the words arise out of new fields of study. The mere art of writing, or penmanship, should need no further attention except where its technical use is involved, as in business courses. Training in the art of reading and speaking effectively should continue in connection with new forms of discourse which come up in the

study of literary types. That English training is weak, indeed, which makes no provision for the training to effective reading as well as writing of the essay; which provides no training in the art of debate, or in the effective rendering of some of the world's great orations; or even which neglects entirely the art involved in effective dramatic reproduction, to say nothing of the art of reading in a pleasing manner an ordinary poem, or a chapter in a novel. These arts, along with the art of composition, play far too important a part in the activities of life and in the individual's power of appreciation of the world's great artists in these lines to be passed over too lightly in the years of secondary education.

The study of literary classics as works of art, and with a view to the appreciation of their literary qualities, or the imparting of high ethical and æsthetical ideals, belongs distinctively to the sociological group of subjects already discussed under the proper head.

The formal grammar and rhetoric deal more with language as a science, or with the principles of logic, and should find a place in the later, rather than the earlier, years of the high school program. The nature of the training which this period of life seems to demand would put little stress on the formal study of rhetoric. Its more elementary presentation, begun in the elementary school, may well be continued in connection with the composition work and the study of the classics in the early years of the student's curriculum. Its more formal presentation belongs to the undergraduate years of the college. Somewhere in the last year of the work in English should come a good study of some such text on grammar as that by Earle in his "Simple Grammar of English." This would give an opportunity to introduce to the pupil the idea of logical thought as

related to logical sentence structure, as well as something of the history of our language.

A good four years' program of work in the study of the mother tongue and its literature would then be as follows:—

*First year:* English composition, with the reading of classics, such as translations of the "Iliad" and "Odyssey," "Sohrab and Rustum," "Lays of Ancient Rome," "The Ancient Mariner," "Lady of the Lake," "Miles Standish," "Vision of Sir Launfal," "Julius Cæsar," "Man without a Country," "Twice-told Tales," Franklin's "Autobiography," "Sketch Book," Lincoln's "Gettysburg Address" and "Inaugurals." At least four of the above list should be read critically in class with attention to their more prominent rhetorical features.

*Second year:* English composition, with the reading of the "De Coverley Papers," "Silas Marner," "L'Allegro" and "Il Penseroso," "Merchant of Venice," Irving's "Goldsmith," "The Deserted Village," "Vicar of Wakefield," "Mazeppa," "Prisoner of Chillon," "Lorna Doone," "Pilgrim's Progress," "Travels with a Donkey," "Sharp Eyes." The treatment should be similar to that of the first year with increased interest in the ethical and æsthetical problems presented.

*Third year:* The history of English literature in connection with the history of England. The reading of the following classics outside of class: "Ivanhoe," "Tale of Two Cities," Macaulay's "Johnson," Carlyle's "Burns," "Henry Esmond," the Shakespearean dramas from English history, etc. A course in themes based on the history work but criticised grammatically and rhetorically.

*Fourth year:* The reading of "Macbeth," "Gareth and Lynette," "Lancelot and Elaine," "Passing of Arthur," selections from Keats, Shelley, Wordsworth, and Browning, "The House of the Seven Gables," "Joan of Arc" and "English Mail Coach," "Heroes and Hero Worship," Burke's "Conciliation," Emerson's "Essays."

A three months' course, or its equivalent, in English grammar.

Out of some such program of work in English the student should get at least a modicum of grace and accuracy in the use of the mother tongue; he should also acquire some feeling for literature in its æsthetic and ethical aspects.

But he should get more than these two things. In connection with his study of the epic he should learn what part this literary type has played in the evolution of the religious life and art of the race. Along with his study of Shakespeare should come an insight into the drama of different ages and the part it has played in the fixing of race ideals. The study of lyric poetry should likewise call for a comparative view, as should the essay and the oration in prose. Something of the history and development of the novel as a dominant type of modern literature, together with some knowledge of plot mechanism and ability to discern motives, should be a part of the results of high school study of literature. It seems unfortunate that a too close adherence to the mere chronology of literature often crowds out the possibility of any such comparative study of the great literary types.

The foreign language work of the secondary school is chiefly concerned with the development of expressional power. Some attention will, of course, be given to the simpler literature of whatever language is studied, especially in the third and fourth years; but in the main the student's time will be taken in the mastery of the language as a means of expression or interpretation. What is to decide the matter as to which language shall be studied? First of all, we may consider the foreign language work as to what it really offers to the student. If it is the Latin, one of the first considerations, perhaps, may be its direct relationship to the English because of the large number of words in the latter language derived from the Latin and because of its relationship to the grammar of the English language. In other respects the study of a classical tongue offers at least as much by way of comparative study as would a modern language. It leads, also, to a very in-

teresting body of literature, representing the conceptions of politics, art, religion, and philosophy peculiar to the classic age. But unlike the modern languages it offers little or nothing in the field of present movements in human interests, especially of modern statecraft, or commercial and industrial development.

The modern language, on the other hand, serves quite as well for comparative language study; and in the case of the French is nearly equal to the Latin itself in acquainting the student with English derivatives from the Latin.

On the whole, it seems a fair summing up of the situation to say that for ordinary language training which will not extend beyond the high school there is little room for preference as among the Latin, German, or French. For those who would prepare for literary pursuits, such as the law, the ministry, or teaching, or journalism, and also for the study of medicine, there seem to be certain reasons which favor the choice of Latin. Yet it does not follow that men may not succeed in any of these lines and still have no knowledge of Latin. On the other hand there is scarcely one of these callings whose followers would not be greatly strengthened by ready access to the current literature of their fields in the German or the French. Certainly in the interests of the development of a broader race sympathy on the part of our youth it would seem that a knowledge of modern language is indispensable. For those who expect to enter the fields of science, business, or technical pursuits of any kind, there is little doubt as to preference for the modern languages. Here, then, is a case where a fair settlement seems possible only through a scheme of election, the chief difficulty in that event being found in the fact that the youth frequently does not know in time to enable him to elect intelligently.

For ordinary purposes of education three years of work in foreign language would seem to be a fair allotment of time when all interests are considered. It is the custom with most schools, however, to offer four years. If three years are offered, the time would better be given to one language. In case four years are offered, two may be of Latin and two of a modern language, preferably German. The courses available in these subjects are too commonly known to call for any further outlining here.

## VII. MATHEMATICS

One of the oldest subjects, and yet one the adjustment of which in the secondary program of this country has never been quite satisfactory, is that of mathematics. This commonly embraces algebra, geometry, some arithmetic, and in some cases, trigonometry. For a long time the general scheme has been to take algebra at the beginning, followed, after a year and a half or two years of work, by plane and solid geometry. The arithmetic is usually a part of the commercial course.

As a means of mental training geometry, especially, offers good materials for deductive reasoning. The careful analysis required in the solution of algebraic problems also furnishes fine mental discipline. The chief difficulty presented by these subjects lies in the fact that scarcely any of the problems ordinarily made use of for the fixing of the mathematical principles involved are in any way related to the other experiences of youth. In other words, the materials are, in a high degree, abstract. If some successful plan could be found by which more of the exercises could be related to concrete and well-known processes or phenomena in nature or the common industries, the problem of training in secondary mathematics

would be greatly simplified. Undoubtedly much would be gained if we could once overcome the force of tradition enough to enable us to carry the different phases of mathematical study as coördinates rather than in the order of sequence now customary. Geometry, as the more concrete, should precede; but the algebra is too closely related to it by nature and in application to be separated as we are now in the habit of doing. Then again both the algebra and geometry should be closely related to the science work, especially physics and physiography. They should also find application in connection with manual training, domestic art, and agriculture. The ordinary operations of arithmetic should be in constant use in connection with the corresponding processes in algebra in such a manner as to show the development of algebra from arithmetic. Some such correlation of the work in mathematics is in harmony with that attitude of mind on the part of youth which would ask insistently to know the uses of the work. At the same time it should be borne in mind that the development of the work in mathematics must also be toward its isolation. For, as soon as the question of use is satisfied, interest in the study for its own sake grows rapidly under normal conditions of adolescence; therefore this phase of the subject must also have its place at the proper time.

The kind of work above suggested really presupposes some elementary work in both geometry and algebra before the high school is reached. At least the literal expression of arithmetical quantities and the meaning and simple uses of the equation should be known, together with geometry in its numerical relations, and something of constructive and inventional geometry.

In the case of algebra either the work should be con-

finer to a very elementary course in the secondary school, or else enough mathematical training given, and in connection with other subjects, to give some idea of its applications and importance in the everyday world.

For schools where the former course is deemed advisable for any reason, some such program as the following is suggested:—

*First year:* Elements of plane geometry in its demonstrative phases, with parallel courses in elementary algebra and corresponding operations in arithmetic.

*Second year:* Plane geometry and algebra in parallel courses.

*Third year:* Solid and spherical geometry, and arithmetic or trigonometry.

To those students who look forward to technical training requiring mathematics, or to full collegiate courses, the following more complete program is suggested:—

*First year:* Plane geometry and algebra, with arithmetical operations.

*Second year:* Geometry and algebra.

*Third year:* Geometry and algebra, correlated with physics and physiography.

*Fourth year:* Geometry and trigonometry, correlated with physics. Arithmetic in its application to business.

## VIII. MUSIC

The important place which music has in our civic and religious life seems reason enough of itself for the continuation of musical instruction in the high school. Here the youth, at least those who have any musical sense, should have opportunity to experience some of the finer possibilities of this mode of expression, either by actual participation or by sympathetic association with those who do participate. It is really unfortunate that so little is being done, as yet, to open up to our youth the range

of possibility for themselves both in the interpretation of masterpieces and in the undertaking of the elements of musical composition. Of course there is some natural ground for this, on account of the rapid change of the voice during adolescence; but much can be done, if due discrimination is used, without injury to pupils' voices. At least more effort might be made to acquaint our youth with the great composers and their masterpieces. In these days of the pianola such musical training is readily practicable.

### IX. MANUAL ARTS

We come now to the consideration of the manual arts, including drawing and art work, working in wood and iron, elementary agriculture, domestic arts, and business training. It is unfortunate that the conservatism of tradition, or the lack of financial ability, or both, is so long keeping efficient work in these lines from our secondary schools.

In this respect drawing and art work have fared best of all. The purpose is not to make artists of all in the secondary group. It is, indeed, to give opportunity for artists to discover themselves. But the chief purpose of such training is, first, to give to pupils some power of interpretation of, and appreciation for, art; second, to give some little skill in the use of various media as an aid to expression in connection with the sociological and science studies of the school, and in the ordinary activities of life. A well-organized and successfully conducted course in drawing and art work, in its proper relation to other activities of the school, should leave the youth with a considerably wider range of possibilities in the realm of constructive and creative endeavor. The impulse to represent conceptions of beauty is no less strong in the race than the desire

to express utility. The latter may have preceded as a matter of necessity; but the former did not tarry long in the coming.

From the nature of the case, it is not practicable to formulate any very definite program of work for this department. In general, we may say that the training should include something in each of constructive, decorative, and representative work in art. We may assume that the pupils come to this work with a fair knowledge of form, with pretty definite ideas of proportion and arrangement, and with some ability in the use of common media, and the adaptation of each to particular purposes. Most of this latter knowledge will still remain to be acquired, however. The constructive work, and considerable of the decorative work, will find application in manual training and domestic arts, with possibly some hints at landscape designing. The work in representation should involve description, which will coördinate readily with work in natural history; self-expression, which will include both interpretation and original expression, the latter opening out into the realm of the ideal. Of course, imitative work will have its place, for art must cultivate the simpler language of truthfulness. But it would be a poorly constructed program which should leave no opportunity for the expression of higher and more universal truths in the ideals of the individual self.

Among the technical matters which should have consideration may be mentioned a knowledge of value, of color, and of composition. As has been suggested, the work of this department connects itself very closely with the manual arts, especially on the side of designing and decorative work. The mechanical drawing is, properly speaking, only a phase of the processes involved in the wood and iron work, and in agriculture and the domestic arts.

Probably no mere school training of the secondary stage can be expected to turn out skilled workmen in the practical fields. What is more important than this, however, may be accomplished. The youth may be so trained in the correlate use of hand and eye, in the manipulation of tools and materials, as to give him a remarkable readiness of adaptability in any field of activity where such skill is required. After all, this is the paramount thing; for in these times of rapid change, as discovery after discovery reveals new possibilities, those only are likely to survive who possess this power to adapt themselves to the ever varying conditions of industry.

Besides this training of hand and eye, manual training work offers also an important adjunct to science training. The closer acquaintance with the properties of wood and iron furnishes an important element in the pupil's knowledge of physics and physical measurements, not to mention the contribution to botanical concepts through working with different kinds of wood. More important still, the contact is here again with things elemental and primitive, instead of conventional; and the mind is constantly trained to observe certain inherent qualities of materials or tools which are to determine inexorably the success or failure of an experiment. In relation to economics, also, the work is important. It gives some idea of the real nature and extent of the labor element in production; it arouses in the boy that unspeakable sense of joy because of mastery. The creative instinct may thus be awakened in him, and he may thus come to realize the coveted prize of the artist, the only real antidote for the baneful effects of the drudgery of toil, on the one hand, and the lust for wealth or power, on the other.

## X. AGRICULTURE AND DOMESTIC SCIENCE

Similarly it may be seen that training in agriculture and in domestic science relates itself perhaps even more directly to science and economics. In fact, high school work in agriculture should be largely applied science work rather than an attempt at the art side. It is the scientific trend to thought about this ancient and fundamental industry which the world most needs to-day. So, likewise, in the case of domestic science: there are plenty of good housekeepers who know nothing of the sciences involved who can surpass in skill and adroitness much that the school may do on the side of household arts. The real work of the school is to teach the science and show how its application to household interests will give certainty for guesswork and the power to initiate where before everything was by recipe or hard-and-fast rule.

There is a great field, especially in our rural centers of population, for the teaching of agriculture as an applied science; and there is a large place in every community for the teaching of domestic science.

At least one year each, or the equivalent, of drawing and art work, wood working, metal working with hand tools, agricultural science, and domestic science should be offered in the secondary school. Of course this work will not all be taken by any one student. The arrangement may be for five hours a week through one year; or better, perhaps, spread out over two or more years with fewer exercises per week. The time usually given to history, science, and expressional subjects other than manual arts may well be shortened a little to make room for these more active pursuits. If the work is well organized and correlated, no loss will be felt by reason of the shortening.



## XI. BUSINESS TRAINING

What shall we say of business training? Under other headings we have already given some consideration to the business side of mathematics, to industrial geography, and economics. What remains is the more technical phase of the training, as represented by practice in accounts, stenography, and typewriting. These subjects hardly belong in the same category with the manual arts. They are specialized forms of writing and composition, involving the mastery of special forms, symbols, and mechanical execution. For their successful application, aside from mere skill of hand, they are dependent upon training in mathematics and elementary English, together with the broad, general knowledge acquired in the study of foreign language, history, and science. They may train to greater accuracy in the other arts mentioned; they do not, however, contribute, in any important degree, to the mental power of the individual over and above what might come from other activities. Work in these lines should come near the close, rather than at the beginning, of the high school program. Two years may be offered, and might be counted as a fair equivalent for one complete year of English composition. In this case the details of composition should receive careful attention in connection with each article to be taken in shorthand and transcribed on the type machine. Perhaps a better arrangement would be to give the work in one year, allowing double periods as in the laboratory work of science.

The program for commercial work may be arranged as follows:—

*Third year* : Business arithmetic and practice in accounts. (A course in commercial geography should be offered in either the second or third year.)

*Fourth year* : Training in stenography and typewriting, with a course in elementary economics. Where schools are large enough, it may also be found desirable to organize the work in history and science with special reference to business needs, thus making, with commercial mathematics, material enough for a course of four years.

## XII. THE TRADE SCHOOL

This much of purely technical training the high school may safely offer, perhaps, at our present stage of development. It seems unfortunate, however, that in a country so rich as ours, and yet so dependent upon the high intelligence of its citizenship as well as its labor, it should not be possible to provide ways and means for all the youth who are capable of doing so to get a good general secondary education before entering upon any trade-school phase of education. In other words, if trade schools are to be established, let them, if possible, supplement the present secondary training of four years instead of supplanting any part of it. With such extension of high school work, and with continuation night schools for training in commercial pursuits and the various handicrafts, our system of education would be greatly strengthened. Of course this would require more money; but what expenditure could the state better justify? As matters now stand, it is undoubtedly best that our high schools go even farther in the direction of industrial work where teachers and equipment can be secured. For the many boys and girls who stop short of the high school to plunge into the work of life there should certainly be held out an inducement to take as thorough a training as possible along the line of their choosing. For these, full four-year courses in business, in manual training, in agriculture, or in domestic science should be provided. These courses should be as strongly technical as the age and scientific knowledge of

the pupils will permit. At the same time, however, there should be parallel courses in English and some modern languages, in history, especially industrial and economic, in geography, and, for very obvious reasons, in the pure sciences.

Beyond and outside of the class here held in mind is another group who have gotten all there is for them in an academic training. They may have fallen short even before completing the elementary course, but belong to the same class as to age and physical development. For these the more clearly defined trade-school type of education should be provided, along with a more thorough mastery of common English in the form of reading and composition, and of the art of computation as applied to practical affairs. To this should be added instruction in the care of the body and in the plain duties of citizenship. Such a type of school is the Boys' Trades High School recently established as a regular day school in Philadelphia.

### XIII. PHYSICAL TRAINING

Along with manual arts, physical training is a very important factor in secondary education, and one which has not yet come to be recognized at its full value. Under this heading are included, (1) plays, games, and athletic sports, (2) gymnastic exercises, (3) military drill. The purpose of such training, under either form, is complex. It includes hygienic and pathological considerations as well as the development of the bodily powers to their fullest and highest capabilities. The use of military drill is confined chiefly to special secondary schools for boys, commonly known as military schools. It has long been held an excellent training because of the fixing of regular habits, manliness of bearing, prompt obedience to the direction of

superiors, and the development of a vigorous and healthful body under favorable conditions both as to care and exercise. Where such training is supplemented by wise use of the gymnasium and of athletic sports, including swimming, there is no doubt that great benefit may be derived from it.

There are those, however, who object to the warlike associations of such training. This very feature appeals strongly to the adolescent; but the feeling prevails among many, and is seemingly augmented from year to year, that a kind of physical training not suggestive of the more primitive attitude of warfare, but, rather, associated with peaceful pursuits and friendly contest, is the more desirable for American boys.

The exercise of spontaneous play, of games, and athletic sports bears a relationship to normal development which is now very generally recognized. It is unfortunately true, however, that the school conditions are such in most of our cities and towns as to make slight provision for such exercise. As in the case of the manual arts, economic considerations, together with traditional conservatism, make it difficult to secure the ground and room space suitable for such play and sports. In very few cases, indeed, have we come far enough along to provide for the proper expert supervision of this phase of training in its hygienic and pathological aspects. Plays and games we have, often under most unfavorable conditions. Athletics, in recent years, have received much consideration. Few modern high schools, especially those assigned to separate buildings of modern construction, are lacking some provision for athletic training, including the necessary baths. The gymnasium and swimming pool, under competent direction, are more tardy in coming.

For lack of attention to some such systematic training most of our youth are still leaving the secondary school with their powers for motor activity in many directions either dormant or practically atrophied. Such neglect must leave its effect not alone on the physical soundness of individuals, but also on the full rounding of their mental capacities; for mental and motor activities meet at the very point where will takes possession of one's powers in order to sustain a struggle, a shock, or even the ravages of disease.

#### XIV. COMMUNITY INTERESTS AS AFFECTING THE PROGRAM OF STUDIES

From the foregoing discussion it will appear that what is sometimes denominated local interest, and is considered an important factor in determining the program of studies for the schools of a particular community, has pretty largely to do with the group of activities which we have called the manual arts and business training. The one possible exception to this is the foreign language work.

Any careful observer of communities as related to this problem of education will doubtless agree, however, that scarcely any community represents only a single type of demand. There are communities largely commercial; yet a considerable number will represent the handicraft industries. Other communities are decidedly agricultural; yet here, again, both commerce and handicraft are likely to be concerned.

Evidently, then, a school of the people in such communities must provide more than one type of program if all are to have an equal chance for training. Further, this is in harmony with our conception of social freedom. Every boy, we say, must have a chance to prepare himself, not to

be what his ancestors have been, but for the calling for which his aptitudes and sympathies best fit him. In order to accomplish such a result our schools must offer a wide enough range of work so that all, and not one or two classes of youth, shall be appealed to.

### XV. THE ELECTIVE SYSTEM

It is out of some recognition of this principle that the system of electives has come into very common use in American high schools. The adoption of the elective scheme in colleges and the rapidly broadening field of college work have had something to do, also, in bringing about this arrangement of secondary programs. The principle involved in either case, however, is that of diversity of talents and interests among pupils.

There are four methods of adjusting a scheme of electives: (1) election by courses, (2) limited election by subjects, (3) a combination of (1) and (2), and (4) unlimited election by subjects. Election by courses is adopted by those who feel that the chief object of the pupil's choice is the general purpose to be sought in education. It is further argued that no mere youth can choose wisely as to the sequence of subjects, or in such a way as to preserve a balanced distribution of subjects with reference to the particular results which they are expected to produce in the individual's training.

Those who choose limited election by subjects act on the assumption that certain things must necessarily be prescribed, but that beyond this it does not matter much what subjects are chosen. In such cases, usually, the number of electives increases, with a consequent diminishing of prescriptions, from the first to the fourth year.

The third form of election amounts practically to the

second, except that the subjects are written out in groups.

Unrestricted election by subjects throws down all barriers to choice so far as any authoritative prescription is concerned. Here the theory is that quite a noteworthy percentage of youth will be attracted by certain subjects, and if left free to choose, will find their way, finally, to a fairly rational course; while if some subjects were prescribed, they would be repelled by the mere idea of compulsion. Under wise counsel and direction on the part of the principal and teachers this scheme works out very well.

The second type, or limited election by subjects, is by far the most common in practice, and where wisely used, seems to embody most of the advantages, without some of the disadvantages, of the other types of election.

Of course there are certain limitations imposed by the nature of things, even where there is unrestricted election. The smaller high schools with few teachers cannot find the time for the extra recitation work which a number of electives would require. Then, too, if the number of teachers is increased in a small school in order to overcome this difficulty, the relative cost of tuition is greatly increased. There are some subjects which must be taken consecutively; a pupil cannot elect one of these, therefore, without first having taken its prerequisite. A scarcity of competent teachers also makes election next to impossible in many cases where the financial ability of the district does not measure up to the law of supply and demand.

The present status of educational sentiment in regard to the application of the principle of election in secondary schools may be summed up in the following statement of the arguments, pro and con:—

**Arguments in favor of election :—**

- (1) It is in harmony with the American ideal of freedom.
- (2) It gives an opportunity for determining what the people want in education.
- (3) It puts the high school in touch with more young people who need high school training.
- (4) It increases the attendance in high schools.
- (5) By putting students in a better attitude towards their work it produces a better spirit in the school and lessens the difficulties of discipline.
- (6) It limits the amount of work of the individual, thus aiding in securing thoroughness of work.
- (7) It results in better teaching,
  - (a) By causing closer study of individual pupils by teachers.
  - (b) By eliminating weak teachers.
- (8) The widening scope of college training demands the elective system in preparatory schools.

**Arguments opposed to election :—**

- (1) Pupils of high school age lack knowledge sufficient to enable them to choose wisely.
- (2) Children should become accustomed to doing disagreeable things.
- (3) It increases the difficulties of administration.
- (4) It increases the relative cost of the high school.
- (5) It endangers the interests of the state by giving free rein to individualism.
- (6) It leads to too close attention to professional interests in secondary schools.

In the early part of this chapter we have discussed school activities as related to the mental and motor processes involved and to the right social adjustment of the individual. If we take these considerations as our philosophical basis for determining the balanced condition of the curriculum which any individual may elect, it is evident enough that the aim should be to direct the pupils' interests

along such lines as shall save him from a one-sided and purposeless training. A moment's reflection, however, will show us the comparative safety of a rather wide range of election. The thing which is most likely to appeal to pupils of all classes is one or the other of the manual arts. No matter which one is chosen, however, it will lead, inevitably, first of all, to science and history; it will also lead just as certainly to at least language and mathematics. When, therefore, we consider that the chief purpose of this freedom is to ensnare the interest of those who come purposeless to the secondary school, the comparative safety of such a scheme, under wise direction, seems apparent enough.

## XVI. THE QUESTION OF SEX

The question of sex in secondary education we have purposely left out of consideration here. This is a problem to be discussed under a different head, and in that connection the differences in the curricula for boys and for girls will receive consideration.

## XVII. SUGGESTED TYPES OF PROGRAMS

On the basis of the programs for the various subjects we have considered, and in the light of what has been said as to electives preserving the balance between mental and motor activities and social adjustment, let us now proceed to construct a general program for secondary schools. First we may consider the needs of smaller high schools employing but few teachers, but still able to offer four years of work. No school should undertake such a course where fewer than three teachers give full time to the regular work of instruction, not including special tech-

nical departments. For this type of school the following program is suggested :—

*First year:—*

Geometry and algebra with arithmetical operations, 5 days per week.

English composition and classics, 4 days.

Ancient history, 3 days.

Manual training, 3 days.

Drawing and art work, 3 days.

Music at least 1 day per week.

Physical training.

NOTE.—The girls would all have drawing and art work but not manual training. The boys should do part of their drawing in connection with manual training.

*Second year:—*

Plane geometry and algebra, 5 days.

English composition and classics, 4 days.

Zoölogy and physiology, 4 days.

Foreign language (Latin or German), 5 days.

Manual training or elementary agriculture, 3 days.

Drawing and art work, 3 days.

Music at least 1 day.

Physical training. *Health*

*Third year:—*

Geometry and algebra with physics, 5 days.

English history and history of English literature with themes and outside reading of historical classics, 4 days.

Chemistry or physiography, 4 days.

Manual training or elementary agriculture, 3 days.

Domestic arts, 3 days.

Music at least 1 day.

Physical training.

NOTE.—The work in drawing and art will here become merged in the other manual arts work except for those with special artistic tendencies who may go on with advanced work.

*Fourth year:—*

Geometry and either arithmetic or trigonometry, with physics,  
5 days.

English classics and themes, with three months of grammar, 5 days.

Foreign language, 5 days.

American history, civics, and elements of economics, 5 days.

Domestic arts, 2 days.

Business training, 2 days.

Music.

Physical training.

In schools where as many as four or five teachers are employed some elections may be permitted in the last three years, such as a choice of languages and a choice between a full year of zoölogy or physiology in the second year; a choice between two foreign languages and between chemistry and physiography the third year; a choice between two foreign languages and the offering of a full year of business training in the fourth year.

The above scheme, developed to fuller possibilities for a fully organized and larger high school, might be arranged as follows:—

*First year:—*

English: Composition and classics.

Mathematics: Plane geometry, and algebra, with operations in arithmetic.

Latin.

German.

History, ancient.

Science, elementary, and botany.

Manual training.

Drawing and art work.

Music.

Physical training.

*Second year:—*

English: Composition and rhetoric, with classics.

Mathematics: Geometry and algebra.

Latin.

German.

History, European.

Science: Zoölogy or physiology, or both.

Manual training.

Elementary agriculture.

Drawing and art work.

Music.

Physical training.

*Third year :—*

English: History of literature and classics, with theme work and rhetorical work.

Mathematics: Geometry and algebra.

Latin.

German or French or Spanish.

History, English.

Commercial geography.

Science: Physiography or chemistry, physics.

Business training.

Manual training.

Elementary agriculture.

Domestic arts.

Music.

Physical training.

*Fourth year :—*

English: Classics, with theme work and rhetoricals, grammar.

Mathematics: Geometry with trigonometry or business arithmetic.

Latin.

German or French or Spanish.

History, American.

Civics and economics.

Science, physics.

Business training.

Elementary agriculture.

Domestic arts.

Music.

Physical training.

The above scheme will furnish work enough, both intellectual and motor, for any type of school. No attempt is made here to determine the extent of election. In making prescriptions and in fixing limits as to the amount of work to be carried, care should be taken to observe a proper balance among the different types of work, so as to insure a reasonable equilibrium in the training of the individual pupil toward the attainment of right ends in education. In arranging to carry into effect any such scheme of studies as the above, the force of what has been said in regard to departmental organization in the latter part of Chapter VI should become operative. It cannot be too strongly impressed that outside of a few general lines of activity the success of a program of studies is more dependent upon those forces of administration and teaching through which the various lines of work are to find presentation than upon the content of the program itself.

#### PROBLEMS SUGGESTED FOR FURTHER INVESTIGATION

1. To what extent does the present teaching of history in public schools foster and develop true patriotism?
2. An examination into the best modern courses in history for elementary schools.
3. An investigation of the actual amount of history training given the individual pupil in our larger high schools.
4. A study of the relationship which history bears to the development of other secondary subjects.
5. To what extent does the prevalent teaching of the natural sciences in secondary schools tend to secure the ends for which it is proposed to teach science?
6. A study of the relationship of natural science to other high school subjects.
7. Does the average pupil leave high school with a love for good literature?

8. An investigation of the extent to which the literature of the Latin is an appreciable part of the study of it in high schools.

9. An investigation of the German method of treating secondary mathematics.

10. An investigation of the voice problem as related to high school training in vocal music.

11. An inquiry into the provisions made in high school drawing and art courses for the fostering of real artistic ability.

12. The relation of manual training to other secondary subjects. Does it tend to detract from essential work in other lines?

13. A study of the working of the elective system in the high schools of Boston, Galesburg, and Ithaca.

14. An investigation of the results obtained by alternation of subjects in high school programs.

**References.**—"A Modern School" and "Educational Aims and Educational Values," Hanus; "Principles of Secondary Education," De Garmo; "The Educative Process," Bagley; "Principles of Class Teaching," Findlay, Chapter XI; "Principles and Methods of Teaching," Welton; Report of the Committee of Ten; Report of the Committee of Seven on the Study of History in Schools; "The Teaching of History and Civics," Bourne; "The Teaching of Chemistry and Physics," Smith and Hall; "The Teaching of Biology," Lloyd and Bigelow; "The Teaching of English," Chubb, also Carpenter, Baker, and Scott; "The Teaching of Latin and Greek," Bennett and Bristol; "The Teaching of Mathematics," La Grange; "The Teaching of Mathematics," Young; "Teaching of Elementary Mathematics," D. E. Smith; Yearbooks, Council of Supervisors of the Manual Arts, 1901-1907; Report of the Galesburg, Illinois, High School, 1907-1908; "The Meaning of the Movement for the Reform of Science Teaching," C. R. Mann, *Educational Review*, 34: 13-25; New York State Science Teachers' Association, Proceedings, 1906; "What Agricultural Education means To-day," Channing, *Forum*, 87: 785-797; "Agricultural Education," Jewell, U. S. Bureau of Education, Bulletin 2, 1907; "Syllabus for Secondary Schools; Agriculture," Education Department, Albany, New York; "Teaching of Agriculture in the Schools of France and Belgium," U. S. Commissioner of Education, Report, 1905, 1: 87-96; "Some Modern Ideas about Women's Education," Creighton, *Nineteenth Century*, 62: 578-586; "School Training for the Home Duties of Women," Board of Education, Great Britain, Part 3; Special Reports on Educational Subjects, Vol. 19; "Classical Studies," Page, *Educational Review*, 34: 144-150; "Humanistic vs. Realistic Education," Paulsen, *Educational Review*, 33: 36-45; "The Place of Modern Languages in the Secondary Curriculum," Benson, *Journal of Education* (London), n.s., 28: 117-121; "Industrial Training for Women," Marshall, Bulletin 4, National Society for the Promotion of Industrial Education.

## CHAPTER VIII

### ADOLESCENCE AND COEDUCATION

#### I. EARLY CONDITIONS AND METHODS

IN the earlier stages of secondary school development in this country it was customary to ignore the fact that in the gradual unfolding of individual qualities in the transition from childhood to youth a peculiar pedagogical crisis is reached in the high school. As a consequence the middle school period has too frequently been used as a sort of buffer between college influences and methods on the one hand and the usages of the elementary school on the other. This has varied with the source of teachers. Those trained in the college have been accustomed to enter upon the work of the academy or high school about where they left off in their college courses as far as method of treatment both of materials and pupils is concerned. Later another class of teachers have found their way into many American high schools, teachers who have arrived there by some other than the college route. Usually these have moved up, by force of circumstances and the rapid growth of communities, from the elementary school to the high school grades. These teachers have usually carried into the high school the same methods of work and the same standards of conduct that they were accustomed to employ in dealing with younger children. Between these two classes of teachers and the resulting

compromise have our high schools been determined, until now, as to the response they have offered to the demands of the pushing, crowding, pulsating forces struggling up and seeking expression, satisfaction, and direction in the lives of youth. Quite recently, however, we find considerable stress laid upon the importance of physiological and psychological conditions due to the particular period of development represented in the secondary group.

## II. HALL'S "ADOLESCENCE"

By far the most exhaustive presentation of this problem has been given us by President G. Stanley Hall in his book on "Adolescence." The following quotation will probably serve as well as anything to present the real basis of the problem as Dr. Hall sees it: "Adolescence is a new birth, for the higher and more completely human traits are now born. . . . The youth is more objective than subjective, and only if his lust to know nature and life is starved does his mind trouble him by ingrowing. There are new repulsions felt toward home and school, and truancy and runaways abound. The social instincts undergo sudden unfoldment and the new life of love awakens. It is the age of sentiment and of religion, of rapid fluctuation of mood, and the world seems strange and new. Interest in adult life and in vocations develops. Youth awakens to a new world and understands neither it nor himself. The whole future of life depends on how the new powers now given suddenly and in profusion are husbanded and directed. Character and personality are taking form, but everything is plastic. Self-feeling and ambition are increased, and every trait and faculty is liable to exaggeration and excess. It is all a marvelous new birth, and those who believe that nothing is so worthy

of love, reverence, and service as the body and soul of youth, and who hold that the best test of every human institution is how much it contributes to bring youth to the ever fullest possible development, may well review themselves and the civilization in which we live to see how far it satisfies this supreme test."

We are not left in doubt as to the author's point of view. He sets the problem before us in bold outlines. All thoughtful people who have had anything to do with the training of youth, and few have not, readily recognize familiar characteristics of the problems they have met as they follow the pages of President Hall's great book. Not all, however, can feel the problem so intensely as he. His work has been subjected to much criticism, both favorable and adverse. While there are certain principles laid down upon which we must all agree, yet there are those who feel that the stress put upon the great extent of change attributed to this period is rather in advance of sufficiently reliable data to warrant such conclusions.

### III. FURTHER ANALYSIS OF ADOLESCENCE

The physiological facts in regard to growth, the development of organs and functions hitherto dormant or embryonic, have long been subjects for consideration. The effects of this rapid evolving of nascent powers have been discussed since men first began to consider seriously a proper course of training for youth. The problem of fatigue in education, the question of hygienic care as to diet, exercise, bathing, sleep, as related to the normal development of the bodily powers during this period, all belong with the classics of modern education. The relation of all these physiological facts to the problem of intel-

lectual and moral awakening and growth is a matter of more recent consideration. It is indeed fortunate that our attention has been called thus forcibly to this phase of the problem. It is no longer a question simply of concern for the body, although even this concern is made more apparently necessary. Along with a care for the physical conditions comes an equally insistent and closely related call for care of the mental conditions.

With the rapid bodily development, the maturing to functions hitherto dormant, there come correspondingly new feelings, emotions, desires, thoughts as to the meaning of life. We may no longer content ourselves with the proper consideration of needs merely physical. While we may well be doubly careful of proper hygienic conditions, we are also now concerned that the mental environment be satisfactory. There must be healthful associates, healthful books, healthful home life.

The rapid physical evolution of the boy from knickerbockers to long pants brings with it not only a new bodily experience, but its mental accompaniment as well; the result is awkwardness, both in actual condition and in feeling. The development of self-consciousness and oversensitiveness often leads to efforts to appear otherwise; the result is sometimes a defiant attitude or a tendency to appear smart. A natural physical and mental restlessness leads to a love for excitement and constant change of scene or of experiences. The emotions become more intense; love, hate, the vengeful spirit, noble aspirations, impulses to daring and rashness, all, fitfully and for brief periods, sweep the soul with their fervid waves. There are soul strivings, a widening of interest in human affairs, youthful dreams. In the swift change the sense of responsibility often wavers or is lost entirely for the time being. Now a love for roaming

possesses the youthful soul; or a longing for solitude in which to dream and dream.

Altogether it is a season of turmoil, varying in intensity with different individuals. In many self-mastery is so strong as hardly to permit any outward sign of the tempest within; with some the condition verges upon insanity or actually becomes such temporarily. Undoubtedly this is a critical period in the process of education, and requires thoughtful and sympathetic treatment. It is probably true, also, that one of the vitally important elements in the problem is due to the phenomenon of sex. To meet these problems as they present themselves requires the greatest possible amount of individual attention for the secondary pupil. His curriculum should be somewhat flexible, in order to adjust itself to the emergencies of this period of stress if he is to be kept in school and successfully at work.

The real difficulty in the situation is that we are not yet supplied with the proper data for the solution of the problem. True, we are tolerably familiar with the more general and obvious aspects of the case; but even here we are liable to take too much for granted. In the matter of sex, for instance, and the part it is believed to play, Thorndike has pointed out that we are not yet in a position to affirm very much. His conclusions thus far seem to point to a much smaller influence from this cause than has usually been supposed.<sup>1</sup>

Dewey, in his discussions of mental development,<sup>2</sup> calls attention to the gradual unfoldment which proceeds from infancy throughout the period of individual growth. True, the evolution is somewhat accelerated when pubescence is reached; but the change is nevertheless progressive rather

<sup>1</sup> See page 107, "Educational Psychology," Thorndike.

<sup>2</sup> "Mental Development, — Fourth Stage," Dewey.

than spasmodic. It represents a new birth, or, as Dewey puts it, "it is essentially an epoch of reconstruction, a making over." But in stating this fact the same writer would remind us that where the development lower down has been regular and full at each point, this later change will also be explained as a part of an *underlying continuity of development*.

In this, as in all points of the scientific study of educational problems, we need patiently to accumulate facts. We should study adolescence, as Dr. Burnham has put it, "scientifically from the standpoints of physiology, anthropology, neurology, psychology, and in its ethical, social, and pedagogical relations."<sup>1</sup> Meantime we must be content to deal with the problems as they appear and in the light of such knowledge as we possess.

It seems evident, then, that we should seek to adjust the materials and methods of education to the observed needs and tendencies of youth. Indeed, it may very properly be said that the entire program of studies should be adjusted, as far as this is possible in a general way, to the peculiar treatment which the characteristics of adolescence require. No administrative plan for high schools can ignore this phase of the work without danger of running into trouble.

The intention is not to convey the meaning that we here favor the reorganization of the American high school on a plan something like that of the German secondary schools. Such contentions are chiefly for those who think of the high school as a distinct institution rather than a part of the common school system. This difference has been alluded to in the third chapter. Most superintendents know that the adolescent pupil is distributed in varying numbers throughout the elementary school. The super-

<sup>1</sup> See article on "The Study of Adolescence," Burnham, *Ped. Sem.*, 1: 175.

intendent of schools of the city of New York has given us some definite figures on this point in his report for 1906. This view is also supported by Crampton as a result of his investigations with regard to variations in the time of adolescence.<sup>1</sup> Most colleges find that the adolescent, while still at a decidedly verdant stage of development, frequently appears among the ranks of college students. The fact still remains, however, that the most decided change, both physical and psychological, occurs in the majority of individuals at an age corresponding very nearly to the age for entrance to the high school.

Some slight modification of the method of organization and presentation of the materials of education should undoubtedly come to the two or three grades immediately below the high school. There is nothing essential to our present general grouping of the grades to prevent this.

#### IV. THE READJUSTMENT NEEDED

It is no doubt true that one of the chief reasons for the success of manual arts and business training courses as a means of holding pupils in school is the peculiar manner in which these things minister to the desires and aspirations of youth. A certain belief is becoming current, however, that something more is needed in the way of readjustment in the work of the high school than merely to add new subjects to the program of studies. Probably few would now question the need of more attention to the motor side of education than was formerly given in the schools. This is a question of social and industrial change. The passing of the old-fashioned home industries and the apprentice system has left us no other choice than to supply their places by the introduction of the elemental motor

<sup>1</sup> For an account of this see *Ped. Sem.*, Vol. 15.

activities into the school. These we must adjust properly in relationship to other activities of the school. Nor are we wrong in seeking to establish such a grouping and sequence of materials as will call forth the varied possibilities of the different individual types represented in any group of boys and girls.

But the real thing we need to accomplish is a readjusted treatment of old materials. We need to get at the moods and aspirations of this budding manhood and womanhood. We need to kindle a fire of enthusiasm about our work in history and science, in English and foreign language, and in mathematics. The motor activities may help us to do this. Not that we are to make high school work easier, but that we shall find for the boy or girl that motive which shall make the doing even of hard things easy. This, after all, is the power which educates. It matters not nearly so much what a boy studies as that he really studies something.

In the old pioneer days of western rural schools the boy who was so inspired by his teacher as to enable him to "cipher" through his Ray's Higher Arithmetic was, by so doing, gaining a large share of liberal education. It is such boys that have done much toward making the great West what it is. This is not true simply because the training was arithmetic, although that work did involve several from that group of activities which go to develop the mind, while the farm furnished the manual training. But other subjects, pursued with an equally strong motive and as closely related to the realities of life, might have served as well.

The present working of the elective system has many suggestive lessons along this line for the close observer. In one school we may find the enthusiasm confined chiefly

to mathematics; in another the hour for recitation in algebra or geometry is looked forward to with a feeling of dread. Here we see a class fairly reveling in the beauty and the wisdom, the wit and the tragedy of Shakespearean drama; at the next school the class drags drearily through one scene after another of the "Merchant of Venice," sighing out their relief at the sound of the electric gong calling them to a respite. Even Greek, now almost obsolete as a high school subject, draws to itself a large group in a certain high school where it is given its chance among the electives. Draws to itself? Yes, as it is there presented. Ah, the teacher's true art! Who has not heard the complaint of some individual in a group of high school teachers as he bewailed the fact that the students give all their time to the preparation of work for Miss So-and-So? But let no one in authority interfere. Rather let him who complains give thanks that by this token he is permitted, even afar off, to witness the awakening of minds which have heard the call to high endeavor and have caught its spirit from the lips of a living teacher.

The old German adage—"If you would make a thing ring, you must strike it"—is applicable to the work of teaching. Boys, especially at the adolescent period, often get the idea that school work is not real and drop out into the activities of the world. As a matter of fact, and as they often discover later, there is nothing more real than the work of the school. If it seems different, it is because nothing has struck the boys. As far as possible the work of the school should be so readjusted as to make its reality in relation to life more readily felt. Not only is the program of studies a matter of concern, but the teachers employed are also a very important factor. High school authorities are recognizing this more and more. There is

a keenly felt need for a strong masculine element in the teaching force. On this account the rapid decrease in the number of good men available as instructors in our high schools is a matter of great concern.

## V. COEDUCATION

The problems of adolescence bring us face to face with the problem of coeducation, especially in secondary schools. When all the arguments are considered, pro and con, the advantage seems still to be with coeducation rather than against it. Among the reasons advanced for segregation of the sexes during at least a part of the adolescent period are the following: 1. The differences in temperament and mental inclination make it desirable that boys and girls be trained apart. 2. The inherent differences in social and industrial interests call for corresponding difference in training. 3. During the years of most rapid sexual development boys and girls instinctively shun each other at times. 4. Too much association at this period, with a strong spirit of camaraderie, takes away much of the real charm and freshness which ought to characterize the attitude of youth toward the opposite sex.

Those who favor coeducation for secondary schools present the following as the most reasonable grounds for their contention: 1. The mingling of the sexes in the high school tends to give a stronger and more proper conception of the amenities of life, thus diminishing the difficulties of discipline. 2. Coeducation results in a better rounded intellectual development for both boys and girls. 3. It adds to the moral tone of the school. 4. It is an economic necessity. 5. It is further held that differences in mental inclination and habits of thought are largely the results of the

past education and social condition of the female as compared with the male, and that coeducation tends to remove a difference which is not inherent, thus placing the two sexes on a fairer basis of equality. To state this in another form, coeducation is more truly democratic.

Naturally coeducation has an advantage in the fact that under the administration of such a system of training woman has greatly advanced, as compared with her previous condition. This is claimed to be more especially true in America where coeducation is most common. It has its greatest advantage on the side of economic necessity, at least so far as past and present conditions are concerned. The undertaking involved in any attempt to duplicate the high schools of our cities at this particular stage of our development is too stupendous to receive any present serious consideration. Think of a situation like that of Louisville, Kentucky, for instance, as a rather extreme illustration of the difficulties involved. Louisville already has segregation; and under the laws of Kentucky so vividly before our minds in connection with the Berea College case, Louisville, to be both law-abiding and consistent, must maintain four high schools entirely distinct in organization, two for boys of the different races, and two for girls.

Here again, as in the study of adolescence, we are lacking sufficient data. Thus far we have been content to draw our conclusions chiefly from the most obvious aspects of the two types of schools as they exist. We have in this country excellent opportunities for a comparative study of the merits of coeducation and segregation in high schools. In most of the cities of the East and South segregation is practiced, while in the West, very generally, coeducational schools prevail. In some eastern cities, as in Boston and

New York, coeducational and segregated schools exist side by side.

By the inauguration of some carefully conducted investigations along the lines of those differences of opinion which cause the variations in practice we might, in time, secure enough data on which to establish a reasonably scientific judgment.

## VI. THE ENGLEWOOD EXPERIMENT

Recently an experiment has been started by Principal Armstrong of the Englewood High School, Chicago, which is based on the idea that there are certain lines of work where the nature of the sexes calls for segregation, while in the main the work may still be in common. At any rate, the sexes may safely be kept together except in recitation work, and in that even in some subjects.

In his advocacy of the plan Mr. Armstrong speaks of the school as presenting the grouping of boys and girls together as in the home. Just as in that case they would be more or less segregated in their occupations, so they may naturally be in the school. Not only are there physical differences as to development, size, and bodily endurance, but there are also different purposes in life. The contention is that these differences in purpose are sufficient grounds of themselves to call for some marked differentiation in their school training even in the same subjects.

The experiment was begun by segregating the pupils of a midyear class. The subjects chosen for the test were Latin, German, physical geography, algebra, and English. Men were placed in charge of the boys in most cases and women teachers in charge of the girls' classes. A slight variation of this gave an added variation to the test. The

results as testified to by the teachers were found to be mainly advantageous to both boys and girls. This experiment is still being carried on.

Mr. Armstrong expresses the belief that to maintain such a scheme of partial segregation successfully would require stronger teachers in several particulars than the coeducational plan. He looks upon this method of adjustment of high school work as simply another step in the gradation of the school. By adjusting the presentation of a subject to the interests and life purposes of a given group it is found to be possible to make much greater headway.<sup>1</sup>

## VII. NATURAL SEGREGATION

The last argument agrees with the conclusions of Julius Sachs,<sup>2</sup> who undertakes to show that the throwing together of boys and girls in the high school tends to weaken the effort of the boys on account of the necessary adjustments in the work of a given subject in order to adapt it to the interests and purposes of both girls and boys. He further points out as another inevitable result that many girls are thus led to overtax their physical strength.

President Van Hise has clearly pointed out the tendency toward a natural segregation which takes place in universities. This comes about, first, through the differentiation of university departments along the lines of vocation, thus inevitably throwing the boys and girls into distinct groups. Second, it results from the rush of girls to certain courses, especially literary courses, often to the necessary exclusion of boys from several sections of those taking the subjects.

The introduction of electives and industrial subjects

<sup>1</sup> See *School Review*, 14: 726-738.

<sup>2</sup> See *Educational Review*, 33: 504-520.

into high school programs is producing a segregation similar to that going on in the universities. It seems not unlikely that the whole matter may ultimately find a kind of automatic adjustment in this way. The friends of this movement argue that the work in certain lines, as in manual arts, physical science, some of the mathematics, etc., must be handled differently with boys than with girls; while the work in the languages, literature, and history may be treated alike for both. The Englewood experiment is thus all the more interesting, and its further outcome will be awaited with much interest as calculated to throw some light on a very important administrative problem.

The results of a somewhat extended observation of secondary schools by the author in a practical way would seem to emphasize the need of differentiating the work in some courses on account of sex. The applications of mathematics, physical and biological sciences, and the manual arts, come plainly within this consideration. The same is doubtless true of civics and economics. There is a certain interest in civil affairs and in economic principles which centers in the home and should be seen by our girls more from the *mother* and *housewife* point of view. All will certainly agree that physical training should be carefully adapted to the differing needs of boys and girls. Even in the study of English, the rhetorical work and some of the types of classics to be studied may well be different. With this much granted and provided for, may not the remaining portions of the high school work still be done on a coeducational basis with much of advantage and a minimum of disadvantage to all? Our answer to this question must wait upon carefully observed experimentation.

## PROBLEMS SUGGESTED FOR FURTHER INVESTIGATION

1. An investigation of the effect on high schools of the decrease in the proportionate number of male teachers.
2. A study of the results of separate schools for the sexes in this country and in Europe.
3. A study of the partial segregation scheme of the Englewood High School.

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## CHAPTER IX

### DISCIPLINE,—ITS PURPOSE AND SPIRIT

THE change that has come about in the relative amount of time and space given to the discussion of corrective discipline in schools is a fair indication of the advance we have made in this country in the methods of training children. Books discussing school management now devote attention almost entirely to the instructional work of the school and the best ways of keeping pupils interestedly busy. Formerly one of the chief topics of such books, as well as of teachers' gatherings generally, was the management of difficult cases of discipline.

#### I. THE FACTORS OF DISCIPLINE

From what has been said in a previous chapter even those not experienced in directing the school activities of youth might readily infer that a high school would present some features peculiarly interesting with reference to general conduct. One of the first things lying back of all secondary discipline is the psychological character of the adolescent. The love for excitement, for change, for action, the desire to do something of consequence, call for recognition and direction. For fickleness, irresponsibility, and the seeming carelessness of abstraction at times, one must know how to make due allowance. Rashness of action or of speech must not always be taken too seriously. Yet all these varying conditions must be so directed, coun-

teracted, or suppressed, as gradually to lead the individual to sane self-direction as a member of the social group.

The home conditions are also an important factor to be dealt with in individual cases. Some pupils come from homes of affluence, where every wish may be, and frequently is, gratified, and where no opportunity remains for acquiring a conscious personal feeling of responsibility. Others come from homes of high moral tone but moderate circumstances as to wealth. They have learned already to assume their share of the duties of the social group to which they belong. Still others are from homes where there is neither wealth, high moral atmosphere, nor anything which makes strongly for the fundamental conditions of social well-being.

All three of the above-named conditions are again subject to intensifying influence from the community, or at least to some decided modification thereby. These things tend to make the problem of discipline a complicated one. The immediate neighborhood of the school is often a source of peculiar difficulty in this respect. This fact adds further reason why care should be exercised in the selection of a school site over and above the consideration of mere convenience or accessibility.

If we add to what has already been mentioned the real purpose to be accomplished by secondary education, we have before us the main factors lying back of the problems of discipline. Primarily the school is a training place which is intended to develop the best of one's individuality in such a way as to adapt it most completely to one's natural and social environment, and still leave the individual with his distinctive characteristics, so far as these may be worthy of preservation.

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## II. THREE FORMS OF DISCIPLINE: INSTRUCTION

To accomplish this the school offers at least three forms of discipline: The discipline of instruction, the discipline that is purely corrective of conduct, and the discipline of the social life of the school. Of these three forms of discipline that of instruction is the one most distinctively characteristic of the educational process which the school represents. Let us consider briefly what this discipline of instruction stands for. Such a consideration will involve some discussion both of the purpose and of the general method of instruction. We are already familiar with the general scope of work to be offered in the secondary school. The intellectual side of this training involves instruction in history and science; the motor side involves training in language, both native and foreign, and in the manual arts and music. The purpose of this instruction, so far as the youth is concerned, is to aid in putting him in possession of the common arts of life; to transfer to him as much of the result of man's past activities as he may need in getting his own historical adjustment; to train him to open-mindedness and alertness toward the phenomena of nature and the lessons they teach; and out of it all to insure in him a well-balanced moral judgment and a will to act in harmony therewith. In other words, the ultimate purpose is right conduct on the part of the individual in his relationship to material things, to his fellow-man, and to all that concerns the progress of the race.

To secure this end through the process of instruction implies a methodical arrangement both as to materials and treatment. Of the two, treatment is the more fundamental thing, and involves some knowledge of the order of development of the mental and motor powers, as well

as of the adaptability of materials and activities so as to make them minister to such development. Naturally in the more primitive stages of education the chief thing was to train the young in the simple arts of life. For this purpose mere imitative work, learning by rote, was quite sufficient. As man gradually widened his field of experiences new powers developed, both of the hand and of the mind. The processes to which his necessities subjected him became more and more complex. Hence later we find him, while still using the rote method, obliged, by this same growth and complexity, to acquire certain thought processes. Even this was at first confined to the memorizing of established forms as in Chinese education. Early Greek education, while also chiefly a matter of imitation, yet differed in this, that the imitation was not of mere dead forms but of the living human model. This imitation of life was, first of all, action; the learning process came as a secondary thing. In the later periods of Greek education we find the methods greatly changed. First Socrates and Plato developed the philosophical method, while Aristotle through his philosophy introduced to the world the objective-subjective or scientific method of treatment by which he taught that truth was to be found in nature, in social life, and in the soul of man. While in most respects his influence was in the realm of deductive philosophy, yet in a very significant sense we may look to him for the beginning of modern methods of treating human knowledge as the materials of education.

The advent of Christianity, and with it the strong impulse to convince men of religious truths, brought another element into the realm of educational method. This was the power of persuasion. It had already been

used by all peoples as a means of controlling the actions of men and securing their submission to the laws of the social environment to which they might belong. But it remained to the Christian church to perfect this as an important method in education.

Later on Bacon and his successors developed methods similar to those first suggested by Aristotle, applying them more completely to the processes of the organization of human knowledge and the inductive method of teaching. In this way we have what is known as the modern scientific method. More recently still has appeared the psychological aspect of the scientific method, followed by what may be called a tendency toward the sociological treatment of the materials of education. By the psychological aspect of method we undertake to know the nature of mind and the order of its development in the child and youth in order that we may adapt the materials of education to the needs of the various stages of this development in such a way as to produce the best results in the character of each individual. The sociological treatment goes a step farther, and puts emphasis on the adjustment of the individual to his social environment, and to training to social efficiency.

Thus far very little is really known that can be said to be scientifically sound along these latter lines; but what little is known may be put into use while research is going forward looking to the determination of all the more fundamental aspects of the problem. As already indicated in the discussion of the program of studies, we know in a general way what processes of the mind are involved in the study of the various subjects of the secondary group. We also know what training is to be looked for in connection with certain definite lines of motor activity, as in speaking,

music, drawing, working in wood or iron, etc. The finer distinctions, those differences which should enable us to select and adapt the materials of education to the psychological unfolding of youth in harmony with social needs and tendencies and with some degree of nicety or with some certainty as to what the composite of results is to be, we know little about as yet. As a result there is still much to be accomplished along the line of experimentation and research in psychology and sociology before we may be said to have anything like a scientific basis for the application of general, to say nothing about special, method in education.

As a theory the doctrine of interest has been well worked out; and it has been fairly tested, also, in the practical work of education. Probably nothing which has come into the field of educational theory in modern times has given such an impetus to the progress of teaching as has this doctrine. It is safe to assume that we must continue to recognize the place of even the most primitive of methods in the successful training of youth. There is still a place for rote work and imitation, for much of formal discipline consists of the mastery of the endless details of conventionalized forms in the arts by means of which all knowledge is expressed and transferred. But we are equally safe in assuming that one of the first things to be accomplished in instruction is to secure the interest of the pupil. There is naturally a peculiar difficulty, just at the adolescent stage, in inducing very much of that sort of individual activity of the pupil which really educates, without first creating or finding a basis for interest in the work to be done. It is not to be understood that interest is to be invoked to the exclusion of real difficulties requiring earnest effort and concentration to overcome them. By interest as here used is

meant that peculiar juncture between motive and accomplishment which gives zest to an undertaking and renders even routine vital as something essential to attainment. It is in doing this first thing that the teacher is to come into closest personal contact with the pupil, a contact to which sympathy alone can open the way.

### III. FUNCTION AND ATTITUDE OF THE TEACHER

This brings us at once to consider the function and attitude of the teacher in instruction. First of all we may say of the teacher's function that it is to lead into action, to establish ideals and awaken desire and enthusiasm in attaining them; to make known the sources and uses of the materials necessary to this attainment; and to keep from error or point out mistakes.

The attitude of the teacher is expressed primarily in qualities purely personal and due to what is inherent and temperamental. These, however, are all more or less affected by training and experience. Such qualities are sympathy, due largely to emotional strength; sensitiveness in its various aspects; degree of nervous energy, and power of persuasion.

A further expression of the teacher's attitude in instruction is found in his sense of the importance of the conventions and traditions of society, and especially of the school. In this respect it is easy to find those who go to the extreme one way or the other. Probably those who succeed best in the discipline of instruction are those who are able to preserve a fair balance. Of course most of these conventions and traditions are to be respected; but when a teacher is much given to the habit of constantly insisting upon extreme observance or recognition, the pupils become indifferent through weariness. Take for instance

the movement of classes between recitations. The traditional standards of the school require teachers to stand guard in corridors and to insist upon orderly lines and no talking. As a matter of fact the few moments should be moments of relaxation; and so long as pupils avoid crowding and boisterous conduct there is no reason why they should be kept under surveillance at such a time. The better conducted schools secure excellent results by merely requiring pupils to observe ordinary rules of propriety during such intervals.

A very important element in this relationship of the teacher to instruction is to be found in his zeal for and love of the subject he teaches. This involves scholarship and professional training and something more. It is not the teacher who is finished in a certain branch of study, but the living, earnest student of it, in all its bearings, that can best inspire interest in a given line of school work. There is a broad difference discernible in the treatment of a lesson by a teacher having only an elementary knowledge of a subject, even though well trained in methods of presentation, as compared with the teacher who has had the more liberal training suggested by a college or university degree. Even with little or no knowledge of the formal principles of pedagogy involved, the latter will often teach far more effectively than the one who has little to offer as inspiration to the student beyond the mere externals of a superficially favorable treatment. Not that a knowledge of the best methods of treatment is undesirable; what is here referred to is that conventional type of pedagogy usually taken without much reference to a knowledge of the subject itself.

Generally speaking, it is in the class room that the personality of the teacher is put to the test. It is in the class

room, certainly, that real integrity of mind and heart become discernible to the sensitive mind of youth. It is here, then, that the teacher's success or failure is apt to begin. The ability to interest, to inspire confidence, to convince of fitness without openly claiming it, to satisfy the ordinary sense of youth that the work offered is genuine, constitute the qualities which enable one to control in the schoolroom. Without these things, no amount of assertion of authority or of invoking higher powers will enable the teacher to retain the respect and attentiveness of the pupils.

#### IV. CORRECTIVE DISCIPLINE

It is not to be inferred, however, that there will not be cases, even with the best of teachers, which require especial care and attention in treating them. This brings us to the problem of discipline as a corrective in determining conduct. Part of this problem, of course, is the problem of all social life,—the result of clashing interests, of jealousies, of really depraved conduct which exists alike in youth and adults, and which must be disposed of discreetly but effectively. Often these bring about situations which can best be dealt with by the prompt invoking of authority.

The essential problems of corrective discipline grow out of the moral and mental status of the adolescent already referred to, and call for the utmost wisdom, tact, and sympathy of the teacher. It is in the meeting of these things that the peculiar power of our best teachers of youth is often to be found. This begins with that same class-room success mentioned above. In most instances such matters are to be settled by the teacher under whose eye they make their appearance. However, with pronounced types it may be desirable to enlist the coöperation of the principal, of

fellow-teachers, and often of the parents. A boy or girl assumes the attitude of a real tough, for instance, not because inherently so, but because of a desire to appear courageous, or careless, where really timidity or sensitiveness is the root of the trouble. Often an otherwise good boy, but oversensitive to being reminded of the fact, and especially of being singled out before his comrades as an example of goodness, resents the action by proceeding to demonstrate the contrary. Such a condition frequently grows out of an unwise parading of a boy's good work as a student, often with the result of a sudden dropping down in his class standing. In such cases a little wisely directed coöperation of teachers and principal may set the student right.

Most of the indolence and carelessness of youth in school is directly traceable to adolescent conditions, and should be dealt with accordingly. This does not always include those who come from homes of wealth and luxury where they may have been mistakenly trained to indolence. There is perhaps nothing under this form of evil which so tries the skill of the teacher and all administrative ability as a case of indifference because of the assumption that nothing remains to be done but to spend a father's fortune. The need of an education does not appeal to such a youth. The only hope in this case is to appeal to the pupil's innate love of achievement in some way, and thus arouse in him a real desire to acquire ability in some line of activity.

Happy, indeed, is that principal to whom no cases of discipline ever come as a result of a teacher's bungling or inefficiency. Perhaps no severer test comes to a man than to be called on to adjust, in a satisfactory way, a case which is evidently the teacher's blunder rather than the pupil's

evil way. But adjust it he must, and in such a manner as to save both teacher and pupil if possible.

Boards of education sometimes formulate rules in regard to the conduct of pupils, modes of adjustment, etc. He is a fortunate principal or superintendent, however, who can so manage his school as to leave no grounds for such official action except in a most general way. This is peculiarly true when applied to the management of high schools. The point at which such rules are apt to be of greatest efficacy and a real boon to the principal is where an adjustment is called for by some unreasoning parent. The reference of such a case to some authority outside oneself has often saved the day in a crisis of management.

#### V. DISCIPLINE OF THE LIFE OF THE SCHOOL

There remains to be considered the discipline of the social life of the school. Under this head we may include first of all the general attrition of life upon life in all the more informal relations among the pupils themselves and of pupils and teachers. The atmosphere for this influence, under normal conditions, will emanate largely from the intellectual life of the school and the general moral tone of its discipline as determined by the teachers and by the community life about the school. Then there are special groupings growing out of the life of the school. There are clubs, literary and athletic organizations, fraternities, perhaps; to say nothing of the little "sets" and "cliques" that will persist in forming in the eddies of this stream of young life,—wonderful stream, sweeping ever onward and outward, and gradually but resistlessly swelling to a mighty flood! There are those who fear the confused contact with all classes and conditions in life which comes to the

youth in the free public high school. This is the parent instinct to protect the offspring against harm. It is a particular form of the more general instinct of self-preservation. Out of the impulse from this instinct have come all class distinctions, all organizations of an exclusive nature that occur in an infinite variety of forms in every group. This human quality goes back to the days of primitive man when individuals first combined for protection against fierce beasts of prey, or later against enemies of their own kind. In itself it is a wholesome fear, for it saves the youth from many otherwise unsuspected evils.

The result in the case of schools is the attempt by some parents to find immunity for their young through the selection for them of a special private group with which to pursue their education. This gives rise to most of our private secondary schools, and the purpose is in itself a commendable one. Others, again, insist that the mingling among all classes is the only way in which the young are to develop real strength of character and the ability to deal with all classes satisfactorily in the everyday affairs of life in a democracy. These realize the dangers, but they crave for their boys and girls such a training as will put them into sympathy with all classes.

Certainly it is the business of those who administer our public high schools to seek to minimize those influences which are really pernicious in this general contact, at the same time that it should be their aim to secure, in the highest possible degree, a thoroughly democratic atmosphere of the school.

To accomplish all this calls for much thought and for a wise direction of the social life of the school. We have spoken of cliques and sets as eddies in the stream. If the currents of school life and organized effort are kept strong

and constant, there will be much less likelihood of such groupings. The same is probably true of the fraternity movement. This is often spoken of as very undemocratic; yet if we look for the most striking tendencies in democracy as we know it, we shall find that one of them is the formation of just such exclusive sets or orders among men and women. All this is done primarily with the idea of protection; yet we know that it is not in harmony with our ideal of democracy. In our religious orders, in all secret fraternal orders, in clubs and unions, everywhere, we find people seeking exclusiveness. Of course in much of this we note that the primitive idea of protection has become warped into a form almost unrecognizable. This is peculiarly true where such attempts at exclusiveness are made by the young. It is claimed, and justly so, by those who object to high school fraternities, that they work a real hardship upon those pupils who are left out. In the natural zeal of youth the lines are often too sharply drawn, and a spirit of division and often discontent pervades the school. In view of these facts there can be little doubt as to what should be the policy of those in whose hands the administration of schools is placed. It may be possible, however, to accomplish more by seeking to absorb these organizations in other interests than by opposing to them the negation of authority.<sup>1</sup>

Athletics have also become a source of concern to those most deeply interested in our high schools. In this, as in the case of fraternities, the secondary schools have sought to imitate the colleges and universities. It is not that athletic sports are undesirable, but that interscholastic contests have usually proven so. Once rid secondary athletics

<sup>1</sup> Some idea of the extent to which authority has already been invoked in the case of fraternities may be gained by referring to the legal enactments and decisions on the subject cited in Chapter II.

of the evils resulting from such contests, and the more strenuous sports afield may well continue to constitute a valuable part of the physical training of our youth. As a result of the vigorous action taken by all leading organizations of those having to do with secondary teaching there seems little doubt but that this problem is well on toward its solution. The aim should be to secure the greatest good to the greatest number. To this end a larger variety of sports is needed. If these are provided, and if our boys and girls may soon have the advantage of careful medical examinations as a means, among other things, of determining the especial need of each individual in the form of such training, we may yet come to realize the high value of such activities in an educational way.

## VI. THE RESULTS OF DISCIPLINE

The real effect of school discipline, under whatever form, is to be found in the general spirit which pervades the school. This spirit will be manifested to the careful observer in the general attitude of the pupils toward their work, their teachers, and their general surroundings. Of course this spirit of the school may be influenced by local traditions. But a well-organized teaching corps composed of competent men and women will always be the chief factor in its determination. This point is well illustrated by the cases of two schools in one of our large cities once visited by a high school principal from a neighboring state. At the first school visited, immediately upon entering the building, the stranger accosted the janitor in the corridor and asked him where the principal might be found. He was told that the principal was in his office, but could not be seen. Passing on to an open class room, the unwelcomed visitor listened to the latter part of a recitation. When the

gong sounded, the classes were lined up in the halls and marched, with teachers heading the columns, to the class rooms where they were next to recite. Everywhere there was a spirit of sullenness bordering on mutiny. This seemed to be true of teachers as well as pupils.

A second school was visited and here the conditions were quite the reverse. The visitor appeared at recess time. A young man — one of the pupils of the school — was standing near the entrance. Evidently noticing that the visitor was a stranger, the student raised his cap, and asked if the visitor wished to see the principal. When answered in the affirmative, he very politely offered to show the way, led the visitor to the principal, and introduced him. This spirit pervaded the whole school. There was no confusion, yet no unnatural constraint. All seemed interested, all were pleased to share in the life and duties of the school.

The ultimate test of the efficiency of discipline, in school or out, is in the conduct of the life of the individual who has come under its influence. This is another way of saying again that the purpose to be held in mind is the training to live in one's social environment, having due respect to one's fellow-beings, and yet living in the most effective way possible as an individual. Certainly the least that we may expect of our high schools is to turn out young men and women prepared to live as free but law-abiding citizens. To do this we must train to self-control, a line of conduct springing from intelligent exercise in an atmosphere of freedom rather than the lockstep habit of prison discipline.

#### PROBLEMS SUGGESTED FOR FURTHER INVESTIGATION

1. A study of discipline among the Chinese.
2. A study of Greek discipline.

3. The evolution of the scientific method of teaching.
4. A study of the psychological and sociological aspects of method and their present status as to actual application.
5. The development of the art of persuasion as an element in educational method.
6. The growth of the doctrine of interest.

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## CHAPTER X

### THE LIFE OF THE SCHOOL

WE are returning here to a theme which was made a part of the discussion on discipline in the preceding chapter; or, rather, we are continuing the discussion begun in that chapter under the above title. It does not seem wise to pass over so interesting and vital a subject in its relationship to school administration without giving it some more special consideration. In our previous references to the life of the school we have called attention to some of its broader characteristics as related to general discipline. It will now be in order to consider these elements more in detail.

#### I. FACTORS WHICH DETERMINE IT

In order to comprehend the real nature of this life in its solidarity we must consider the factors which go to form it. First among these is the fact of democracy. In a sense it is true that the high school community represents a survival; but it is also true in most cases that in this group of survivals all classes in our democracy are represented. Here, side by side, are children of the rich, the well-to-do, and the very poor; of the leisure class, the merchant, and the coal digger; of the genius, the successful man, and the "born short"; of the pagan, the Jew, and the Christian; of the highly moral, the complacent, and the positively immoral; of the white race, the yellow race,

and the black race. All or most of these elements, male and female, of a world's great democracy are found represented in the vast majority of American high schools. It needs not to be said that this fact alone is a very important factor in determining the life of the school.

From their childhood these boys and girls have taken into their minds, along with the smiles or buffets which life has brought them, the teaching that "all men are free and equal before the law." Here in the school they sit in the same classes, are attracted or repelled by the same teachers, read the same literature, solve the same problems, discuss the same history; think, feel, dream dreams; learn to love, respect, honor, aspire; to hate, despise, hold in contempt, despair; become discriminating, tolerant, loyal to class or teacher or school; or become careless, intolerant, disloyal, mean,—all this as common children of a democracy in the common school of all the people. They have met together here in order, ostensibly, to take on, in a brief space of time, elements of all the vast reaches of the thought, the endeavor, the conventions, the institutions, bequeathed their generation from the past of the race. In reality they will get, more than anything else, the results of the play of life upon life, as they mingle with teachers and schoolmates in the varying activities of the school.

And this is well. How better can a democracy train those who are to mingle in its life, to share in its burdens, to sweat and groan with it in its travail to bring forth a strong and vigorous public morality? The more nearly the life of the school in this respect corresponds to real life the better prepared will our youth be to live successfully with the same conditions of life about them when their school days are over.

A second important factor in determining the life of the high school is found in the characteristics peculiar to youth. These have already been discussed in the chapter on adolescence. A restatement of them in more general terms, perhaps, will suffice for our purpose here. First of all is the factor of sex with the consequent development of larger social interests and relations. As a result of this there arises a new self-consciousness. The period of youth is marked also by a deepening of emotional life, by an intense desire to engage in physical activities of all kinds, and by a deepening of the religious sense.

The character and purpose of the high school itself as a social instrumentality and as determined by the expressed will of the state is another factor in determining the nature and trend of its life. All legislation by the state, fixing in any way the nature of the activities of the school or the methods of organization and government, including provisions for sanitation or safety, text-books, curriculum, the qualifications of teachers, must bear directly, as a formative influence, upon the character and life of the school community. In the same category would occur the rules and regulations made by boards of education for the conduct and government of the school. All this may be entirely independent of the influence of the real needs of youth as determined by the characteristics named above.

There are other outside influences than those of democracy in general, and of legislative bodies. In a certain sense these all might be considered under the one heading of democracy, although not necessarily peculiar to it. Other states than democratic ones may mold their schools by legislation. It is nevertheless true that legislation will take its quality largely from the nature of the

state. This is readily seen in contrasting the educational systems of this country and of Europe. The same distinction may be seen in the case of the other outside influences which may be considered among those factors which determine the character of the life of a school.

Such other influences are what we may call the dominant institutions and traditions of a community, the prevailing moral atmosphere, and the financial ability of the school district. Among dominant institutions are those of the larger community of state and nation, such as colleges and universities, and state and national civil service. As these factors are considered at some length in later chapters, their enumeration here will be sufficient.

## II. DIFFERENT PHASES OF SCHOOL LIFE

Having accounted for the composition of the social group with which we are dealing, we may now inquire into the different phases of this life and the forms under which it is made manifest. This will take us into a study of the interaction of the various factors mentioned above; for it is probably true that in all these manifestations some if not all of the factors will be seen to be components.

We shall take first the conventions of the school. These include the daily program, or the relative time devoted to school work, to recreation, and to other occupations; the habit of the school in regard to restricting individual freedom (1) as to class, (2) as to seating, (3) as to social intercourse, (4) as to other privileges and immunities; requirements as to preparation of lessons, including library and field work, and the preparation of written exercises; the nature of records kept as to attendance, scholarship, physical conditions, etc. These are partly traditional and partly determined by the legislation of states and school boards.

Probably this phase of school life is more influential than any or all others in giving boys and girls the impression that the school is unreal, and that if one is to live normally, he must get away from school. Much might be said here regarding the proper management of this aspect of the school in order to reduce to the minimum the consequent unrest and friction on the part of pupils. Perhaps it is enough to say that all these conventions should be made as yielding and flexible as the nature of the case will permit without the sacrifice of anything really essential. In reckoning with them the two fundamental principles involved are the relation they bear to the propensities of youth, on the one hand, and to the accomplishment of the purposes of education, on the other.

Another aspect of the community life of the school appears in those ideals which are shared in common. When we consider the intensity of feeling and the strong inclination to take sides, the spirit of partisanship characteristic of youth, we shall be able to understand how high school pupils naturally cling to certain ideals of the school. These ideals are often traditional and sometimes thoroughly bad; yet to uproot them one must succeed in supplying counter ideals which appeal even more strongly to the desires and aspirations of the leading elements in the school. It is only the masterful among teachers who can succeed in planting new ideals; yet it very often happens that this is the only way to improve a given school condition.

Such common ideals may pertain to punctual attendance, to scholarship, to moral conduct, to the attitude of the school toward the teachers, toward certain special exercises or functions of the school. When once they possess the common mind of the school, good or bad, they are adhered

to with all that peculiar zeal which marks the age of early youth. The possible influence of such common ideals in molding the lives of individuals is readily apparent. Great is the responsibility and great the opportunity of one who possesses the peculiar faculty of setting up for a school community its ideals.

What we may call the morale of the high school is another phase of its life which deserves attention here. By this is meant the confidence and the zeal with which the students of the school enter upon their work or on any special exercises, or engage in friendly contests in athletics or debate. This feature will depend largely upon the ideals cherished by the school and upon the spirit and attitude of the teachers. Confidence and courage develop best where there is conscious power together with freedom in action. The strong teacher who enthusiastically leads on to achievement in books is sure to beget in the minds of his pupils that confidence and courage necessary to overcome difficulties or opposition in any other form. Other things equal, a maximum of freedom in action will also inspire the same quality of confidence. Experience shows that it is not so easy to secure these qualities in the characters of youth under stern and autocratic rule.

Still another interesting way in which the life of the secondary school manifests itself may be called the interest in and strong desire for voluntary organizations. This propensity of high school boys and girls is sure to show itself in some form, whether in school or out. If understood and taken in time, it yields readily enough to guidance, provided the methods chosen by teachers or others are in harmony with youthful inclination. If neglected, it is sure to come up spontaneously, and often in a way to mar the life of the school, or of the social group to which

the youth belong. Forbush, in his "Social Pedagogy of Boyhood,"<sup>1</sup> has given us some very suggestive materials on this subject of youthful organizations. In fact, we only need to look about us to see that the tendency persists strongly even throughout early manhood. Why should not high school principals and teachers profit by such revelations? Grant that boys and girls will organize in some way; that they have definite tendencies as to the purposes of organization; and that these purposes differ for boys and girls: what more definite basis for the determination of policy can be desired than this?

### III. PLACE AND IMPORTANCE OF SCHOOL ORGANIZATIONS

The neglect to take advantage of plain facts and tendencies leads almost invariably to some form of trouble in the administration of high school affairs. Investigations point to the fact that, in the vast majority of cases, boys organize for some plan of physical action. Later they will take up organizations for literary and other intellectual interests. In boyhood they like athletics, military organizations, orchestral or band organizations in music, expeditions to field or forest or stream, manual work, — anything that satisfies their craving for action in groups. In this respect their tastes nowhere run parallel to those of girls. The latter like sewing, tea-parties, piano musicales, charitable organizations for supplying cookery, flowers, etc.: Boys need virile men as leaders, men who can enter into the organization heartily with them. Girls seek the association of womanly young women who can also enter sympathetically and sincerely into their girlish enterprises. More recent developments show a growing interest for athletic sports among girls; but we are not prepared to say

<sup>1</sup> See *Ped. Sem.*, 7: 307-346.

whether this is a natural tendency that has lain dormant until now, or only an inclination to imitate boys as a result of association with them in school work. Here is one of the problems to be considered in our future study of coeducation.

We have already touched upon another phase of school life in discussing organizations; for some of the latter naturally connect themselves with occupations of the school. It is here that the school life shows itself, under normal conditions, in its most distinctive aspect. After all, the center of this community life must be in that great work for which the school is organized. We are compelled to admit that, at best, the school is but a conventionalized scheme for enabling the individual to overtake race growth in time to enter upon his manhood's career as nearly as possible abreast of his time. In seeking to accomplish this difficult feat for those who cannot see far ahead, and who must take most of it, after all, on faith, we should be unwise indeed if we did not make use of as much of the reality in the lives of the young as will possibly adjust itself to the accomplishing of our main purpose.

And really is there not a profound significance in the instinctive tendency to organize which we have noted above? How else can youth ever test the principles which they are expected to deduce from their historical studies, their mathematics, their art, their physical sciences? All these activities in which youth delights, — are they not as necessary a component of that race growth to be taken on as are the lessons to be learned from books? If we believe that the value of such lessons lies in the inculcation of a love for truth, in the development of nobility of character and in learning justice, in cultivating honesty, loyalty, and unselfish devotion, in acquiring strength and skill of

hand and accuracy of vision, in training the judgment to unerring decisiveness,—how are we ever to hope for their realization in those who are limited in training to expression in language with, perhaps, a little drawing or music?

In considering the occupations of the school, then, as a manifestation of its community life, we should include all those organizations and activities which in any way serve as a means for the development of the expressional side of feeling, thought, character. If these organizations or activities are wrong and therefore discordant with the great and fundamental purposes of education, we should seek to displace them. Where prohibitive measures are used we should be sure to supply, adequately, the place of the thing prohibited, in so far as it may be found to harmonize with the desired ends of school administration. Where any possible way offers of displacing the offensive element through substitution this method will usually be found safer and more effective than prohibition.

#### IV. AMERICAN SCHOOLS BEHIND IN THE SOCIAL ORGANIZATION OF THE SCHOOL

In this life of the school we Americans have made little progress as yet. Our English brothers can teach us much in regard to this phase of secondary work. The story of Arnold at Rugby may well hold us for a time in our seeking after ways and means for the elimination of this element of greatest weakness in our secondary system. True, we may not adopt the "house system" of the English boarding school, but we may get a lesson in adapting the spirit of it in some of its most essential features by a study of Principal Findlay's work at Cardiff<sup>1</sup> in organizing a day school whose pupils all slept at home, in such a man-

<sup>1</sup> See articles by J. J. Findlay, Vols. 15 and 16 of the *School Review*.

ner as to keep as much as possible of the social life of the "house" plan.

By this plan the pupils are organized in "houses" under the leadership of instructors, but with the pupils participating in the organization and management of "house" affairs. Under this scheme the games and other general social activities of the school are organized and conducted. Mr. Findlay tells us that he also introduced the *Eltern-Abende* which Rein has used so effectively at Jena under the changed name of an "at home" for parents. In this way parents, teachers, and pupils were brought into a closer social life, the boys leading in the plans and preparations for the entertainments.

We are not surprised when the same writer says: "I regard the secret fraternity as an abnormal growth, due to the neglect of the American high school to organize itself *as a society*." In the light of the facts already set forth in this and one or two preceding chapters, who can question the correctness of this view? The trouble with us is that we have no time for a social organization of the school. We take the matter of carrying out the curriculum too seriously, and thereby fall far short of its satisfactory accomplishment. In another place we have urged the necessity for a saner organization of our high schools by the appointment of head teachers over related groups to cooperate with the principal in organizing the work of the school. If the Chicago high schools could have had some such system, instead of the present more or less highly specialized system of departments without heads, who shall say but that the disagreeable experiences through which they have been passing on account of the Greek letter fraternities might have been averted?

The shadow cast by the trying fraternity episodes in the

central West and on the Pacific coast are not without their lesson. Many of our high schools are already struggling heroically with the problem of adjustment of the school to the social needs of the pupils. We have our athletics, rather crudely organized as yet, our oratorical and debating clubs, our orchestras and other musical organizations, our school publications and our literary societies. But these are successfully managed in but few schools.

### V. THE OAK PARK PLAN

In some communities the people are awake to the needs of the situation and are organizing for helpfulness in the betterment of the high schools in their social aspects. One plan for such organization is that in operation in connection with the Oak Park, Illinois, township high school. This is a large suburban high school of a superior type under the management of Principal J. Calvin Hanna. In connection with this school there is a Parents and Teachers' Association which works through three committees, — educational, social, and athletic.

Through the social committee the various social functions of the high school are planned. Fortunately the people of the community are liberal-minded enough to appreciate and permit those social recreations in which young people delight. By means of this work much is being done toward the establishment of a fine democratic spirit in the school.

The educational committee provides for open meetings of an educational nature by means of which higher educational sentiment is cultivated. This committee also plans for a visitation of the high school by many of the parents. Incidentally some mothers take studies with the children, "brushing up" on former studies or even taking new ones.

The committee on athletics has provided the school with an athletic field of seven acres, leased for the purpose, and properly fitted up through funds secured by the committee. In the athletics of the school something for everybody is the aim. One year of physical training is required of all. This is the first year. All kinds of competitive games and sports are organized for the boys of the upper classes. The girls are not allowed to play public games; but they have their nine-man game of basket-ball, their folk and gymnastic dancing, volley ball, relay racing, etc.

All of this work is carefully supervised. We have given the details thus fully in this case in order to show what is being attempted by some high schools toward the better organization of the social life of the school.

It is well, as has already been said, that certain objectionable features that have sprung up here and there should be suppressed; but those in authority should not fail to see that a reasonable substitute in the way of some organized activity be provided.

## VI. STUDENT SELF-GOVERNMENT

One further consideration remains: To what extent should this life of the high school be permitted to become self-directive? To use the phraseology of some recent discussions, should we adopt student government in our high schools? In another paragraph we have said that "confidence and courage develop best where there is conscious power together with freedom of action." The purpose of our schools is to train for a life among a self-governing people. The salient facts here are that we are a free people, but that we recognize the need of government. Training to intelligent self-government, then, involves training to a full realization of the place of indi-

vidual freedom and also of governing authority in this mode of national existence. Failure to realize the place of authority in such a government may be said to constitute a peculiar weakness of our democracy.

We are prepared to say, then, that whatever form of school government consistent with the nature and needs of immature youth and the capabilities of the teaching personnel of our high schools will best prepare our youth for the full recognition of this twofold nature of self-government is the kind of government for our high schools to adopt. The writer will never forget the impression made upon him by frequent visits to the Central High School of Kansas City, Missouri, in 1890 to 1892. Here was a school of 1600 boys and girls, governed, apparently, with ease. At class intermissions they were left free to pass through corridors and up and down the stairways without any one on guard, with no system of espionage permitted. Conversation was free, movement deliberate or rapid, as suited the individual's convenience. The only requirements were that there be no unseemly boisterousness, and that all be in their places for the next recitation or study period. Yet never was there observable any marked deviation from such conduct as decorum in any social group would dictate.

Equally interesting was a recent visit to the Roxbury High School of Boston. Here a system of pupil government is in force. The pupils have their own government organization, including a court which decrees what punishment shall be given in case of offense. The principal allows no espionage by teachers, no reports on offenders to himself. He requires that the findings of the pupil court be reported to him without naming the offender. He states that his only need of interference is occasionally to soften the severity of the penalties meted out. It should be stated,

also, that the problem is here simplified by the fact that the pupils are required to be present only for recitations and for the satisfaction of any special demands upon them in connection with their work. The school is coeducational, and smaller than the one at Kansas City. The apparent results are in every way as good as those found in the latter city.

Now which of these methods is right? The probabilities seem to favor the conclusion that each is right in its place. For Principal Clay, with his splendid faith in his pupils, and these in the Roxbury High School, and with his fine corps of teachers, there is probably no finer thing than his scheme of self-government as a means to the chief end in view. Yet it is hardly safe to conclude that, therefore, all high schools should undertake pupil government. For Principal John T. Buchanan and Kansas City his scheme was best. There was a maximum of freedom, but a sufficient amount of restraint to act as a constant reminder that the necessary element of an elert authority existed. And more principals can be found who are capable of doing what Buchanan did,—many are doing it. Many others are trying to help out personal inadequacy in themselves and their teachers by a wretched overdisplay of authority, and by hampering the entire situation through the laying of restrictions of more than doubtful utility and therefore doubtful of enforcement.

For him who would undertake the administration of such an institution for the training of youth as a public high school, there is ample room for study in the life of the school.

## PROBLEMS SUGGESTED FOR FURTHER INVESTIGATION

1. An investigation of the extent to which overemphasis on the conventions of the school tends to repel boys.
2. A study of the prevailing ideals common to individual high schools and their relation to the life and effectiveness of the school.
3. An investigation of the extent to which physical activities in connection with high school life serve as a means of expression of ideas gained in study.
4. A study of the student-government scheme in this country.

**References.** — "The Social Pedagogy of Boyhood," Forbush, *Ped. Sem.*, 7: 307-346; "Diary of a Western Schoolmaster," Stableton; "Citizenship and the Schools," Jenks; "Social Phases of Education," Dutton; "Social Control," Ross; "The Corporate Life of the School," Findlay, *School Review*, 15: 744-753, also 16: 601-608; "Pupil Self-government, its Theory and Practice," Cronson; "Relation of School Organization to Instruction," Jackman, *Pop. Sci. Mo.*, 70: 120-123; "Self-government by Students in School and College," Thompson, *Social Education Quarterly*, 1: 41-53; "Regulation and Control of Competitive Sport in the Secondary Schools in the United States," Lowman, *American Physical Education Review*, 12: 241-255. See also references to Chapter IX and references on adolescence under Chapter VIII.

## CHAPTER XI

### METHOD AS APPLIED TO HIGH SCHOOL INSTRUCTION

IN the ninth chapter the subject of method has received some attention on account of its inseparable connection with the discipline of instruction. We have thus far referred to it, however, only in the most general way. Lest these general references be interpreted as indicating a lack of appreciation of the place and importance of method in a scheme of secondary education a special chapter is here devoted to its further consideration.

#### I. A KNOWLEDGE OF METHOD NECESSARY IN ADMINISTRATION

Nor is some such treatment untimely in a discussion of school administration; for one of the chief duties of the high school principal is to be able both to recognize effective teaching and to point out defects and suggest remedies in other cases. All this involves on his part a thorough acquaintance with the general principles of method and their special application to the teaching of particular subjects. The need for such knowledge on the part of the administrator of a high school is rendered all the more imperative at the present day because of the large number of those who begin high school teaching with little or no previous training in the nature and uses of method in education.

## II. -SCANT TREATMENT OF HIGH SCHOOL METHODS

If any further reason were needed for the introduction of the subject here, it might be found in the fact that there is scant treatment of this particular phase of instruction in the works of most writers on method. Many and excellent discussions on method as applied to the teaching of the elementary grades are to be had; but when it comes to that period which, roughly, may be said to begin at the seventh grade, or at the age of eleven to thirteen years, most writers break off suddenly, as though this were a veritable *terra incognita* or else a stage at which all necessity for method naturally disappears. Most of those among American writers who have ventured even an approach to this phase of the subject leave us with a feeling that the work is incomplete and fragmentary. At least one English writer, Welton,<sup>1</sup> has done better than this, and has given us a very helpful and suggestive treatment such as will readily apply to secondary teaching. Perhaps this is due in a general way to what M. V. O'Shea calls a "characteristic difference between English and American books on education."<sup>2</sup> He speaks of English writers as treating educational subjects in a systematic and logical manner without basing this treatment on much in the form of experimental data. American books, as a rule, he characterizes as not systematic or logical, but as abounding in concrete materials. Be this as it may, we are still waiting for a full treatment of method for high schools; and it is to be presumed that it is chiefly a lack of sufficient data that causes American writers to hesitate at this point. In any case this must be the plea of the present writer

<sup>1</sup> "Principles and Methods of Teaching."

<sup>2</sup> In his review of "Principles of Intellectual Education," by F. H. Matthews, *School Review*, March, 1908.

in view of the very brief treatment given the subject here.

In justice it should be said that we are not left altogether without materials when it comes to the treatment of special subjects. The valuable list in the American Teachers Series by Longmans, as well as several numbers in the Teachers' Professional Library series by Macmillan, represent a distinct acquisition to the high school teacher's resources on method.

### III. DIFFERENCES DUE TO ADOLESCENCE

It remains for us here to consider briefly, and from the point of view of the administrator of the high school, such principles of method, general and special, as are now at our command. In the first place the question arises as to what conditions exist in the form of differences between elementary and high school education which call for a corresponding differentiation of methods of teaching. Most of us would doubtless readily accept Dewey's notion of the gradual development of mind from childhood through pubescence and adolescence. This, of itself, would signify such a change in mentality as would naturally result from the growth of conceptual and reasoning power and the training of imagination and will.

Probably a more important factor still, as a result of growth in years, is the larger outlook on life believed to be attributable to the rapid development at this period of the physical element of sex. This larger prospect opens the way to the action of various socializing influences before unrecognized. As a result the attitude of the individual toward instruction changes. From that of a passive or imitative recipient the mind turns rapidly to the attitude of inquiry as to what is best, and why, in order to fit oneself

for the social relations and obligations which begin to make themselves felt to the youthful mind.

As a result of this change in the youth's conscious relationship to his environment, there come new aims and purposes for the secondary school. These we all readily recognize. Nor do we think strangely of the fact that with these new aims and purposes must come either a selection of new materials of education or the adaptation of old materials to this new situation. In the elementary stages of the educative process we have found it desirable to dwell upon the arts of the school, and to content ourselves with very simple and concrete aspects of nature and history. As we approach the age of pubescence, we find a growing demand for those things which unfold more fully the world-life, whether of man or of nature, and which lead more or less directly to the acquisition of such elements of knowledge and skill as shall fit one for some definite calling in life.

As a result, there are introduced into the pupil's range of mental exercise history of various peoples in different ages, a more comprehensive view of natural forces through science, a wider reach in mathematical conceptions and applications, the presentation of æsthetical, ethical, and economic truths in literature, civics, and geography, and even a wider range of linguistic possibility through the foreign language work. Nor do we omit the continuation of work in drawing and music, nor the introduction of the means to training in the elements of skill in handiwork.

Surely, if we were in doubt before as to the necessity for some readjustment in the methods of instructing youth, the foregoing recital of changed conditions must convince us of such need. No doubt this call for readjustment will be found more marked in the case of special method in treat-

ing individual subjects than in the application of the principles of general method. We may now proceed to a definite, though brief, consideration of the principles of general method as applied to high school instruction.

#### IV. THE DOCTRINE OF INTEREST

As has already been said,<sup>1</sup> the doctrine of interest is as applicable to secondary education as to elementary. Perhaps we should say that it is more applicable; for certainly the grounds for interest have deepened and narrowed somewhat. From a rapid flitting from one to another of numberless sensuous appeals the interest of youth begins to concentrate more upon the relationship of the self to environment, and especially those elements of environment which promise to satisfy his awakening social interests. If interest is appealed to aright, therefore, we should find the adolescent responding just as readily and with more intensity than does the child. If, on the other hand, youth and its aspirations are not understood, the chances are that listlessness will be the only response. Or even where only vague and ill-defined desires are springing up, unless the teacher's presentation of interests appropriate in themselves is accompanied by sufficient enthusiasm to arouse these still slumbering desires, the result is still likely to be indifference.

It is probably at this point of gradually awakening interests and desires that evil elements in the youth's environment get in their nefarious influences and set up wrong ideals. The writer has had occasion to observe, in several instances, how rapidly evil has grown up in the minds of youth who have been left for a brief time only in the hands of a teacher having no power of kindling such

<sup>1</sup> Cf. Chapter IX.

enthusiasm. We may take it for granted that mere physical demonstrativeness will not be mistaken for enthusiasm. Often these fires burn deepest under a calm exterior ; but the vibrant tone, the kindling eye, the deep though subdued earnestness of the teacher who possesses this quality, will call out a ready response in youth.

## V. CORRELATION

The subject of correlation as a principle of method has been so frequently referred to in other chapters as to need little further mention here. There is no subject taught in the high school which does not relate itself more or less directly not only to other high school subjects but backward to the subjects characteristic of the elementary grades as well. It should be a part of each teacher's preparation to know these points of contact and inter-relationship and to be able to adjust the methods of teaching to the facts which this knowledge reveals.

Correlation in the sense of concentration of all subjects about two or three, whatever may be its advantages in the elementary stages of education, can hardly be said to be feasible to any extent in the high school. In the first place the nature of the subjects of study or training is more distinctly differentiated ; and in the second place the greater development of reasoning power, together with the increased concentration of the pupil's interests, naturally tends toward isolation of subjects. There are, nevertheless, two very important uses to be made of the principle of correlation in high school teaching. The first of these is in connecting up with the past, as in the teaching of mathematics, for instance. Thus far, in the majority of cases, the pupils' mathematical concepts are in the comparatively specific terms of arithmetic and relate chiefly to concrete

experiences. In all cases there will still remain the need of developing a broader connection between these more specific processes and the corresponding generalized processes of algebra. In the case of geometry the correlation will turn from the application of derived geometrical principles through rules to the actual derivation of those principles through demonstration.

Similarly nature studies and secondary science should find a blending; the elementary training in the more isolated facts of history should lead over into the field of a closer historical survey in the study of types among peoples or in specific historical movements; while all along the line the relation of the arts of the school, more or less perfectly mastered in the elementary stage, to the larger activities of the secondary period will constantly be kept in mind. The necessity for these arts as means, and therefore the demand for their perfect mastery in order to make the most of the work in hand, will call out renewed effort to make good any conscious defects from this previous training where their acquisition was largely unconscious and formal.

The second use to be made of correlation is in properly connecting a given subject with those contiguous fields of thought to which it is inseparably related. This is a vital element in this phase of secondary method. Indeed, it may be said to become more intense at each stage of advancement beyond the art side of the individual's education. There is a sense here in which the tendency toward isolation needs modification through the skill of the teacher in the use of method. These side relations are the guy ropes of support to the main shafts of isolated development in the mind. Without them the mind is unstable, the individual's outlook upon life is lacking in what we call balance, sanity.

Of course, it will be equally fatal to spend too much force on the side lines. The natural selection of the age demands that minds develop, as it were, from a terminal bud, rather than with that general diffuseness which a too vigorous growth from lateral buds would produce. This does not, however, involve the utter exclusion of side lines. A tree without any branches is almost unthinkable; certainly the development of any line of thought or of organized principles in the form of a secondary subject of study, without clearly developed relations to other fields of study, is undesirable.

Probably our colleges and universities should be held accountable, in this particular instance, for most of the weakness now apparent in the method of treating the various subjects included in the high school program. The training they offer for prospective high school teachers is deplorably deficient in respect to the second phase of correlation we have been discussing. What we need for this field of teaching is not merely a knowledge of science, but science in an applied form, applied to the art of secondary instruction. This calls for something more than a specialized subject training. It involves as well a survey of the two fields of correlation which have been outlined above.

## VI. THE SCIENTIFIC METHOD

The more constant and general application of the scientific method in all lines of study and investigation of a secondary order will call for an ever increasing emphasis on the processes of inductive and deductive reasoning. Each of these processes will be found to have its place, although the deductive is likely to get the lion's share of attention, unless care is taken to emphasize the inductive

method of thought wherever practicable. To attain this result one may not depend solely on the proportion of subjects which seem to offer themselves to induction in reasoning. The teacher who does not thoroughly appreciate the nature of the inductive method, and know how to organize the materials of education and direct the teaching process to its accomplishment in the work of each pupil, is very apt to fall back unconsciously on the deductive method, no matter what the subject. We are perhaps prone to think of the scientific method as applicable only in the case of the natural sciences. It was pointed out in Chapter VII. that the natural sciences present a peculiar advantage in this respect because of their comparatively elemental nature. It would be a serious mistake, however, not to seek the application of this method in dealing with all departments of human knowledge.

It is possible in this connection to confuse the meaning of scientific method with training in science. The systematic method of inquiry involved in the teaching of the sciences may well serve as a definite and superior means of training to the scientific habit of mind. The work of the secondary school would fall far short of its function in this department of instruction if it did not succeed in turning the application of this induced mental attitude to other subjects of study. This would lead to what Edward Fry<sup>1</sup> calls "the determination to search after the utmost exactitude of which any branch of knowledge admits." When such a method is applied to work in historical subjects as well as in science, the advantage thus to be gained in training the young to take always the attitude of open-mindedness toward the truth is not likely to be overestimated.

<sup>1</sup> In *Contem. Rev.*, 87: 383-392.

This is no new thing in education. Such a treatment of all fields of knowledge goes back beyond the Greeks even. The application of this scientific method to various problems of a social nature is quite common in modern times. It is that mental practice which makes possible a calm and judicial treatment of a subject rather than the effort to reach agreement or a satisfying decision through the heat of debate, or under the excitement attendant upon the sudden presentation of an entirely new aspect to a problem of life.

Arbitration boards, international or otherwise, various commissions, courts of justice, etc., are familiar illustrations of the social application of the scientific method. It should not be forgotten, however, that even the scientific method of itself is quite inadequate when it comes to a consideration of an all-around development of character. The most that can be said of it is that it is the best we have in the way of method for the acquisition of knowledge, that is, the most accurate, the most exact, attainable. Still other means must be found for the development of the moral side of the individual's character.

## VII. APPERCEPTION AND ISOLATION

The principle of apperception as applied to high school teaching differs little from its use in the primary school. New ideas are constantly arising to be interpreted and organized in the light of previous experiences. If the process may be said to differ at all in the case of youth, it is probably in the direction that the new social interests will give, both as to the class of ideas apperceived and as to the direction of their organization.

One of the common axioms of general method deserves some attention here. We speak of proceeding from the

concrete and applied to the abstract in secondary teaching. While it is just as necessary here as elsewhere in the educative process to remember this axiom, yet it seems to be in the nature of things that the abstract should receive a larger share of attention than in preceding stages. By abstract is meant theory as distinguished from concrete experiences. The introduction of new phases of knowledge, or new thought processes, in a pedagogical way, requires that they have their beginning in some knowledge or process already within the mental grasp of the pupil. It is a mistake to suppose, however, that the youth is to be greatly profited by lingering too long in the region either of this previous experience or of the new applications to be made of the thought experiences he is undergoing. He must come to believe that there are some reaches of thought worth while whose application to everyday living is now beyond his ken. Nay, more, he must learn to find his joy in the subject for its own sake. He must isolate his mind in it, at times, from other subjects and other interests. In this way only is he to acquire that quality which makes true art possible, or renders the mind capable of the greater constructive power which later and larger experiences will demand.

In a consideration of this process of isolation, however, and especially in any critical observation of the teacher's part in it, it is desirable to keep in mind the fact that the real value of teaching is to be estimated in terms of the concrete life of pupils rather than in terms of abstract faculty training. It is not in any fine-spun process of reasoning, certainly not in the development of memory, that we are to seek to test the acquisition of a given group of pupils. It is rather in the degree to which the individual pupil has acquired the power to adjust himself to those

elements of life which may be said to constitute his environment.

### VIII. WELTON'S ANALYSIS OF METHOD

"It is the very essence of effective teaching," says Welton, "to awaken desire and evoke purpose." The same author gives us the following excellent points in the character of good method:—

- (1) Teachers must inspire pupils to purposeful effort.
- (2) Must clearly apprehend the end sought.
- (3) Must be prompt in beginning.
- (4) Must observe an orderly process.
- (5) Must know the kind of mental effort needed and stimulate to that effort.
- (6) Must secure effective results, *i.e.* the development of power. This may be shown in any evidence of enrichment of the pupil's life. The test of effectiveness must be appropriate to the matter tested.<sup>1</sup>

### IX. METHOD OF SPECIAL SUBJECTS; WELTON'S CLASSIFICATION

We may now turn to a discussion of method as it is to be determined by the nature of the subject taught, or special method. Some attention has already been given in another place<sup>2</sup> to the more general aspects of these types of method. We have found that each subject bears its own peculiar relationship to the process of mental development. In general it may be said that some subjects transmit intellectual experiences, others emotional, while others still have as their chief purpose the cultivation of skill. Probably in most cases these three, or at least the

<sup>1</sup> Cf. chapter on "Examinations, Promotions, and Graduation."

<sup>2</sup> Cf. Chapter VII, "The Program of Studies."

first two elements, will be found blended. Yet we may say with Welton again that each has its predominant feature. Using this ground of distinction, he gives us four classes of lessons:—

(1) Information lessons which are predominantly perceptual.

(2) Lessons for the development of theories and general ideas which are conceptual and inductive.

(3) Lessons requiring the use and application of acquired knowledge, also conceptual, but deductive rather than inductive.

(4) Lessons developing constructive and executive skill, with the mental processes imitative or imaginative, and finding expression in some form of physical activity.

To these four we may add a fifth by saying that some subjects, like music and literature, are distinctively emotional, although furnishing incidental occasion for the exercise of faculties developed in other studies.<sup>1</sup>

It may readily be seen that by the use of some such classification as the above each subject may be analyzed into its dominant and subordinate features, and that such analysis will readily furnish a key to the principles of general method that will best apply in a particular case. Under the first class we shall find a minimum of work of secondary grade. Observational science, the concrete study of history as seen in local institutions and in historical remains, and the objective study of art in the form of painting, tapestries, sculpture, and architecture, all have some place in high school training. The use of pictures in the study of history and literature, and the microscopic projection in science belong in the same class.

<sup>1</sup> Cf. Welton's chapter on "The Teaching of Music," as prepared by R. T. White in "Principles and Methods of Teaching."

Under class second would come most of laboratory and much of field work in science where rightly conducted, so as really to represent the inductive method; and considerable work in history and geography, especially where data derived from these subjects are used as a basis for establishing some ethical or economic theory or principle. In this sense considerable of the work in the study of literature might also become inductive. In the science work, especially, the heuristic method will prevail, although not necessarily to an exclusive extent; nor need it be said that this method belongs alone to science, for it may also find application in the type of historical study above referred to. This, however, is not common practice.

The third class of lessons will include, especially, mathematics; it may also include much of the instruction given in grammar in the teaching of a foreign language. Secondly it will include much of the work in history of an ordinary type, together with that part of science work which may be considered instructional and deductively developmental as distinguished from inductive. It is in the discriminative use of these two types of work in science and history, according to the particular object in view, that the real skill of the teacher will be displayed.

Under the fourth class will be included composition, oral reading for expression of thought and feeling, drawing and art work as regards technique, manual training in its various forms, and physical training for rhythmical action or for any form of expression.

#### X. METHOD IN IMPARTING ETHICAL AND ÆSTHETICAL TRUTH

The fifth class, which we have added to those given by Welton, represents a rather important element, though one

which is often neglected in discussions of method. Feeling and emotion other than that engendered by ordinary intellectual or physical experiences rightly occupy a large place in the educative process, and particularly that of the secondary school. We are told that the æsthetic lies very close to the ethical. Certainly this is true in music, in art, in literature, all of which occupy a rather large place in the field of youthful interests.

And what are we to say of method when it comes to the imparting of the æsthetic quality that must go along with the teaching of these subjects? Perhaps it is because of the very elusiveness of those qualities which give æsthetic significance that we hesitate to discuss any such thing as method when referring to them. As well think of analyzing the perfume of the rose, one may say, as to think of a method of imparting the pleasurable state of consciousness which goes along with music that is ravishingly sweet, with art that is exquisitely beautiful, or with literature that pleases at the same time that it exalts. Yet there is a very profound sense in which method is related to the successful imparting of these experiences. This is true not so much in a positive as in a negative sense. It is possible so to teach music, or art, or literature as to rob each of that peculiar quality which is alone the excuse for teaching it. This is truly a paradoxical statement; for really to *teach* means to impart the essential qualities. It is the blundering of those who have never yet come to understand the nature of the high qualities with which they deal to which we have reference here.

There is a method of teaching literature that will not rob it of its beauty and make of it a thing despised. There is another method which will analyze all the beauty out of it and make it stale and unprofitable stuff. "The

letter killeth, the spirit maketh alive," is true of this, as of the teaching of all subjects of a kindred nature. Is it not possible that the chief point to the method in such teaching is in the timeliness of presentation? When we speak of interest and motive on the part of the pupil, do we not imply by this a mental preparedness for the step to be taken, the experience to be entered upon? It is the teacher who can lead his class to the right point, to that vantage-ground from which the lights and shades of the picture, the mental imagery, will most readily catch the eye and kindle the soul, that is the only element of method that is worth while in this case. None but the teacher who has first and often experienced such a soul kindling can ever lead the way. Others may walk that way reading the sign-boards, but seeing no beauty; and few, if any, who follow such a leader will come away refreshed.

Let us illustrate by an incident seemingly foreign to our theme. A boy of twelve, with his father as guide, visited the great World's Fair at St. Louis. During one of the early days at the fair the fine arts building was visited, but the boy soon tired of the pictures. One after the other, "the Pike," the Boer War, the Filipinos, the great industrial exhibits, the various national buildings, claimed attention. Near the close of a ten days' visit they returned again to the fine arts building. This time the boy lingered over the finer paintings, filled with wonder and delight at each beautiful or striking subject. Repeatedly he expressed his surprise that men could paint such beautiful things, pictures full of the beauties of nature and the tragedies and exaltations of human life.

True, the first novelty of the more striking features of the fair had worn off; yet may we not justly conclude that much of the receptivity of the boy grew out of the

expanding and uplifting effect of the fair as a whole? It is life, after all, that prepares us to understand the highest expressible things of life. Our method must lead that way.

It is not the purpose in this presentation of the subject of method to enter into minute details as to the particular method of the class room in the teaching of a given subject. It is here, if anywhere, that the peculiar quality which gives individuality to teaching must have full play. It is enough, perhaps, to have suggested the relationship which a knowledge of the principles of general method, on the one hand, and of the predominant and subsidiary elements which a given subject presents, on the other, has to the work of the teacher of youth. After all, method, rightly comprehended, is a living, vital part of the teacher and the one taught, rather than a mere formal thing to be passed from hand to hand.

#### PROBLEMS SUGGESTED FOR FURTHER INVESTIGATION

1. A study of the scientific method as it is actually applied in some high school or group of high schools.
2. An investigation as to what methods of presentation best succeed in inspiring a love for good literature.
3. An inquiry as to the extent to which high school subjects are isolated, with a tabulation of results.
4. An inquiry as to the extent to which inductive methods may apply to the teaching of history; of a foreign language.

**References.** — "Principles of Class Teaching," Findlay; "The Educative Process," Bagley; "Principles and Methods of Teaching," Welton; "Elements of General Method," McMurry; "Classroom Management," Bagley; "Isolation in the School," Young; "Education and Heredity," Guyau (especially Chapters IV and VI); references under Chapter VII, especially those in which the teaching of special subjects is treated; "The Practice of Instruction, a Manual of Method," Adamson; "Scientific Method," Edward Fry, *Contemp. Rev.*, 87: 383-392.

## CHAPTER XII

### EXAMINATIONS, PROMOTIONS, AND GRADUATION

#### I. THE PROBLEM OF A SATISFACTORY SCHEME OF PROMOTIONS

ONE of the serious problems of school management is that of establishing a basis for promotions that is generally satisfactory. Ever since the organization of high schools examinations have been made use of as the principal means to this end. The question has elicited much discussion, both in teachers' meetings and in educational periodicals; yet, in a way, it is still open to debate. We have passed through various stages in practice, from regular monthly examinations with long-drawn-out finals in which the whole period of secondary work was brought under review to the now very common semiannual tests as a basis for record and promotion. Numerous evils have grown up under the system, such as cramming, cheating, nervous overstrain, inequalities in marking standards, and failing to take account of many important elements in a pupil's progress. The present practice is scarcely free from any of these evils.

#### II. EVILS OF EXAMINATIONS

Pupils naturally brilliant will loaf during the term's work believing that they can make up in a few days by intense study or "cramming" for what they have thus neglected. The assumption is that the educational pro-

cess is one of knowledge-getting, purely, and not of regular growth. This view on the part of the pupils is shared very generally by communities at large and is too often borne out by the nature of the tests given and the basis on which papers are marked.

Other pupils who have prepared regularly will cram because of nervous dread of what is coming, will enter upon their examinations in an overwrought condition, and come out of them with poorer grades, perhaps, than their more careless fellows who have only "crammed," and with the further disadvantage of exhausted nerves.

For quite similar reasons cheating is also resorted to. Cases have been known where the honors of a class have gone to one who never could have accomplished honestly the work which his cheating has made to appear first class.

In a system where the same groups of pupils are estimated by a number of different teachers the difficulty of inequality in the marking standards used is sure to arise. There seems to be no possible way of equating these standards. Of course we may argue that it is as fair for one as for another; but even this cannot always be true. It not infrequently happens that a failure under one teacher will be worth as much as a reasonably good passing grade under another. Then, too, one teacher may mark purely on a quantitative basis, comparing the results of one pupil's work with those of another who may have written more correct answers, but who has neither worked so hard nor grown so much in the period covered.

This failure to take account of all elements in a pupil's progress is one of the most common and at the same time most harmful results of written examinations. It is this fact which will frequently account for failure in practical life on the part of honor pupils, while often the pupil

of only average ability according to his school record will easily out-distance the honor pupil.

In connection with the system of examinations which we have thus briefly characterized, the very common practice has been to record a pupil's progress purely as a quantitative fact. It is so many per cent. Now it is doubtless true that some careful teachers might justly read into these "grades" something more than the mere proportion of correct answers to the series of questions set for the examination. With most of us, however, it is far easier and more likely to be true that we stop short of everything but the mere quantitative element.

It requires but a brief analysis of the idea of progress in school work to show that there are other elements to be considered. The correct answering of a certain number of questions merely marks the memory value of the pupil. Other things which the careful teacher will desire to test are clearness of conception, reasoning ability, nice discernment, constructive power. These things he seeks to know not merely as a given pupil may rank with others, but as he shows actual gain over his own earlier condition. Of course it is quite possible to express all these things in a quantitative form; but the tendency is to overlook most of them where all is made to depend on a written test, the results of which are expressed in per cents. The fact that many teachers insist on marking in other terms than per cents is simply a revolt of the mind against the idea that quantity alone is to be considered in estimating the progress which a pupil has made.

### III. COMMON FALLACIES

Some very common fallacies are cherished by the schools as a result of the prevailing practice in regard to grading

pupils on their work. These fallacies usually affect the entire community as well as the school. They have, indeed, passed into the realm of the traditional, and are therefore destined to persist for a long time to come.

One of these fallacies is that the highest grade marks must, of necessity, show the best training. The relative correctness of such an assumption, of course, depends upon the fairness of the teachers' estimates of the work done by a given group. In many schools this estimate is based only partially upon examination results. The teachers' judgment of individual pupils based on a careful and continuous observation of their work is made an important factor. Where this is the practice, it seems reasonable to expect that the resulting grades will come much nearer to representing the actual progress made.

Another fallacy which persistently clings to the system is that a failure, quantitatively, disqualifies a pupil. In a majority of cases this may be found to be true. But any careful observer of a system of grading based on examinations could point out numerous cases where such results have had apparently little if any relationship to the pupil's real ability to go forward. This consideration seems to emphasize the great necessity on the part of those administering our schools of placing every possible safeguard against such cases of evident injustice.

A third fallacy is that a pupil's real capability is necessarily tested by a comparative rating in his class. Take, for instance, the case of a pupil to whom the mastery of a given subject comes easily. With comparatively little effort he is able to show results, both in class work and in examinations, which readily place him at the head of his class. Were he to put forth the same effort required by some of his fellows to even keep from failure he would

readily accomplish, perhaps, double the amount of work covered by the class as a whole. This simple fact seems to have been long in getting to the surface of pedagogical thought. It is just coming to the fore as a proper subject for investigation and discussion in the form of such propositions as "What to do with our unusually bright pupils."

We might also consider the opposite type of a pupil who, when compared with his class, seems to be weak, yet who, if carefully studied, may be found to be acquiring power at a much greater rate of speed than his mere comparative ranking would ever suggest. In this field of human effort as well as at the stadium it is necessary to consider the handicap in determining the real power of the contestant.

#### IV. NECESSITY FOR PERIODICAL RECORDS OF WORK

Whatever may be the difficulties in the way of correctly estimating and recording the progress made by pupils in their school work we must not lose sight of the fact that there are very good reasons why such records should be made periodically as the work advances. First of all there must be some such basis for classifying the pupils. Even in the same high school grade this may be true. Many teachers prefer to class pupils of about equal working ability together in order to admit of the accomplishment of a fair amount of work for all. Then there is always the necessity, under our graded system, of classifying for purposes of promotion. Where a large number of pupils is concerned, this can hardly be done without some device for estimating the work of all who may be eligible to a certain grade by a common standard. This is most commonly thought of as the purpose of all testing and recording of results.

Again, the record which a pupil has made in school, especially high school, may have an important bearing on his future career. This is particularly apt to be the case when a pupil enters college or seeks a professional training. For this reason it is best that a pretty definite record be kept of the nature and amount of work accomplished by each individual.

There are points in the progress of work in any school at which it is found desirable to introduce changes in the matter and method of teaching a given subject in order to adapt it to the growth attained by study and by the greater maturity due to increase of age. To this purpose examinations and the recording of results readily lend themselves. Such an occasion furnishes an opportunity for rounding out a piece of work along some definite line previous to entering upon a different field of study requiring not only a change in treatment, but a change in the point of view which the pupil is expected to take. The written examination often serves an excellent purpose in this connection. It furnishes one of the best means of training to definiteness of thinking as well as of fixing more firmly in memory the content of what has been worked over.

Aside from the above considerations there is another very good reason for keeping such a periodic record. In any given field of human effort, if it is to be really effective, it is necessary that there be some ideal to be attained. Of course the highest ideals are the mastery of truth and the normal development of self. There are those who believe that to do one's best in study no incentive should be necessary other than the love of truth for its own sake and making the best of one's capabilities. No doubt it is true in many cases that other and lower incentives are too frequently used in our schools. Further we shall all doubtless

agree that the incentive of good grades has been greatly overworked in the past and is much too prominent in the present. Nevertheless there are many boys and girls with imaginations too weak to be much attracted by results too far off or too abstract. They need the stimulus of something more concrete and nearer at hand to enable them to accomplish anything like satisfactory results. To such pupils the system of grading the work rather frequently will appeal, often to the extent of developing in them keen interest in the real things with which they are dealing.

In all this we are constantly reminded of the necessity of making our appeals to individual pupils rather than to entire classes or groups. In order to do this the well-regulated school will offer not one, but many incentives, so that a larger number shall feel the stimulus and speedily respond to it.

## V. METHODS OF PROCEDURE

Having thus pointed out some of the difficulties and necessities of the case, let us now turn to a consideration of a method of procedure best calculated to avoid the difficulties and at the same time provide for the necessities. In the first place we assume that the real purpose is to take note of individual progress and to secure results for each individual as nearly commensurate with his capabilities as possible. To do this we must seek to make the measure of progress absolute rather than relative; that is, we are to measure the individual pupil's present working ability and character as a student with what it was at the time of starting or at the last accounting.

It is taken for granted, of course, that a fairly just classification was provided for at the starting point, whether at entrance to the secondary work or farther on in the course.

Now it is just here that those who are always arguing for the advantages of the competitive element in examinations seem to be most in error. They tell us that the world calls constantly for competition and that our students should therefore be trained to it in the schools. This sounds well enough ; but an examination of the facts will show that by the purely competitive system the competition is very soon likely to be limited to two or three individuals while the rest of the group drop back into a steady pace, slackened, if anything, by the consciousness of early defeat. Put the student in competition with himself and let him understand that any preference shown will be to the one who does the best in the way of individual growth, and we come nearer to the real conditions marking success or failure in the world. We all naturally applaud most the man who wins in spite of a handicap.

At first thought the teacher will say that the only feasible basis for marking the pupils of a class is by a comparative scale. To those who have formed the habit of thinking of grades in this way the plan of comparing the individual with himself is rather difficult. The real trouble is largely one of mental attitude on the part of the teacher. It leads almost certainly to a habit of carelessness as to the growth of individuals, — a thing which all thoughtful teachers decry. All that is necessary in order to put in practice the system of absolute marking of progress is to establish a starting point for each individual from which to measure.

We say that entrance to high school calls for a certain training in school arts ; in historical knowledge and historical sense ; in the habit of observing nature and in an open-minded attitude toward all truth ; in the power to reason about the simpler and more fundamental principles of mathematics, the physical world, and the institutional life

about us. Very well, let us proceed at once to get the measure of each individual by these standards, to the best of our ability, and set it down for future reference. Such a plan of taking account of the present state of mind of the members of a class works well in many ways. It is a common error among teachers that they take too much for granted as to what the previous training of pupils should have accomplished. And when weak spots begin to occur in this presupposed learning, the teacher of the preceding grade or year is soundly berated for doing such poor work.

Having started fairly with what the pupils really know, when the next testing time comes, let us set down, in some form agreed upon, our estimate of each individual's progress as compared with his status at the beginning. This presumes, of course, that we have kept a rather close watch upon what each individual has been doing in the meantime, and if our memories are not trustworthy, we have made notes from time to time of these observations, just as any true scientist should. One of the immediate and most far-reaching results of such a scheme is bound to be a more careful adjustment of each individual's work. Some pupils who, for one reason or another, are capable of more rapid progress than others, have found places in a given group. If they are to remain in the group, they need to have a wider range of work than other pupils in the same subject in order to make their normal growth. If, on the other hand, they are to continue their more rapid forward movement, their work should be so planned as to enable them to gain an earlier promotion to the next group ahead. This may be accomplished through special promotion or by permitting those who are capable to carry an extra subject in advance of their class. A still more desirable method of dealing with such special cases is to find for them some more extensive

treatment of such phases of the subject studied as will best lend themselves to the plan. This will enable the brighter pupils, while still keeping pace with the general movement of the class, to get a much fuller knowledge of the matter in hand, and thus fit them better for their future work in life or college, as the case may be.

It is only by some such plan that the schools can ever do for the most capable pupils all that ought to be done in order to secure to them and to society the full advantage of their greater strength. This will be true whether the individual starts under a handicap or with special advantage due to early training, superior home conditions, or other cause. Nor is it to be supposed that such a plan of procedure will work any hardship to the less capable. They will still have the stimulus of observing what those stronger than they may accomplish when at their best. What is more important still, they will have more of the personal attention of the teacher; and under this more careful guidance most of their imaginary difficulties and some real ones will be removed. Thus they, too, will be surer of attaining to the utmost of their capabilities, and society will again be the gainer.

We have already intimated that the tests should be for quality as well as quantity. Some subjects will be found to predominate in the quantitative, others in the qualitative. Here again there is demanded a careful analysis of each subject and the manner of its treatment as to what results are to be looked for in the pupils. This is only saying that the materials of education should be adapted to the ends in view, and that this adaptation should be, as far as possible, an individual matter.

## VI. PREPARATION OF EXAMINATION QUESTIONS

When it comes to the preparation of questions for written tests, the teacher will have need for a full and comprehensive grasp of the field over which the pupils have worked in the period covered by a given test. Too frequently the making of such questions is left to be done on the spur of the moment, or rather, until dire necessity demands their presentation. As a matter of fact they should call for more careful thought even than the preparation of a new lesson to be presented. First the wording of the questions should be clear and so as to make the elements required in the answer unmistakable. Then the questions should be carefully chosen with reference to the help the answers are likely to give in determining all the values represented in the progress of the pupils which written tests can be made to express. Here is where a thorough review of the ground passed over, and what is of still greater importance, the work really accomplished, becomes absolutely necessary to the making of a proper set of questions. It is evident enough that such a thing must require time for careful thought. The only safe plan for most teachers is to keep a pretty full biographical record of the class as a basis for this phase of the work.

Some teachers make it a point to jot down from time to time the points on which tests are to be made, so that when the occasion comes for the preparation of questions, there will be plenty of material at hand, with little chance for omission of any important matter or for the inclusion of something that has not been thoroughly worked out. On the latter point, if a class has been left with an open field for investigation at any period of the work with the definite understanding that the members are to be held responsible

without further class discussion, of course the teacher will not fail to make this a part of the test work. Otherwise very careless habits of study will be developed.

The test is not the place for the presentation of unusually hard problems or obscure questions. These may well form a part of class training; but when it comes to the round-up, each pupil should feel that he is given a fair chance to express himself along the lines of the simple development of the fundamental principles and classifications involved. At the same time the questions presented should be different in form from those formulated in connection with class work, or of such a nature as to avoid making the test chiefly an effort of memory.

## VII. TIMES OF TESTING

The time of testing should be determined more by the movement in a given field of study or exercise than by any arbitrary division of the school year. First of all there should be the continuous observation of individuals mentioned above with records of these. By this is not meant the practice of marking individual recitations. Very few teachers, if any, can do this in such a way as to give it the broad significance it should carry with it if it is to express the pupil's progress. The kind of record referred to is one which would frequently cover more than a single recitation, and would be expressed in a definite statement or characterization rather than in per cents or letters. Such a description of the pupil's progress should indicate the development of traits, habits of study, temperamental qualities, and whatever will aid in an intelligent estimate of final results of his high school education. Then there is a time when it is best to have a general round-up of the work. This is when a closely related field of study has

been covered and it is proposed to begin over, in a sense, with a topic not so closely related. It is at such points that reviews are best; and the review, rightly conducted, offers the very best of opportunity for making careful observations of individuals. Such occasions, with the intervening records of data from continuous observations, will furnish ample basis for determining a pupil's record at any time, and will not interfere in the least with any arbitrary scheme of promotions such as the semiannual scheme. In the handling of a large school or system of schools there must be some such mode of procedure with regard to the general forward movement of classes. This forward movement, however, is not necessarily to be considered as determining the only time, and hence the method, by which pupils are to be graded for promotion.

### VIII. PROMOTIONS

These promotions in actual practice are either annual, semiannual, or special. Under the scheme above outlined there would probably be considerable use made of the special promotion. Whether the annual or semiannual plan were in force would make little difference in other respects. It is easy to see, however, that the scheme suggested of providing for special advancements of the more capable ones would work much more readily with the semiannual scheme of class movements. The intervals to be made up would be only half as long as in the case of the annual movements.

To summarize, then, a good scheme for marking pupils as a basis for classifying and promoting is as follows:—

1. Determine at the start the pupil's working qualities as indicated by his mastery of the arts involved, the knowl-

edge required for further progress, and his clearness of vision and strength and accuracy of thinking.

2. Observe his further progress along these lines as related to his present work, as well as his mastery of new principles and the general unfolding of his character, and make a record of the same in the form of memoranda for future reference.

3. From time to time, as the work in a given subject favors, give reviews, and follow these by written tests or examinations in order to get further data as a basis for marking.

4. Whatever scheme of notation may be used for marking, make sure that the qualitative as well as quantitative in the pupils' work is fully represented in it.

The whole problem of promotions is one calling for study and careful adjustment. In a recent investigation conducted by the Brooklyn Teachers' Association an attempt was made to find out whether promotions are usually made by subjects or by grades. Out of 554 definite replies 261 answered "by subjects" and 293 "by grades." To the question "Should the brilliant student be kept back with the dull student?" out of 588 definite replies 53 answered "yes" and 535 "no."<sup>1</sup> Certainly no one would argue for a moment on this point with reference to the promotion of high school students.

The discussion really involves the whole question of promotions, including those of the elementary schools. We have spoken above of the annual and semiannual promotions. The carrying into effect of the semiannual promotion involves some very serious difficulties. Of course in a large system of schools it does not matter so much, although even then the problem presents itself of

<sup>1</sup> See report of the president of the association for 1906-1907.

additional room and extra teachers. It requires, also, the adjustment of courses in the high school to meet the needs of classes separated only by a half year. As has already been pointed out, the relative shortness of intervening periods between classes is a distinct advantage in the case of special promotions. A careful and extended study of this problem leads to the conclusion that most of the difficulties attendant upon promotions may be obviated by very close attention to the forward movement of individual pupils in the lower grades. Such forward movements should be made only when there is evidence of sufficient strength to enable the pupil to sustain himself in the advanced grade without too great strain.

By a well-supervised and judicious use of the special promotion it is quite possible in a small school system to receive two entering classes each year into the first grade of the elementary school and to promote but one class each year to the high school. In such cases the eighth grade will not always come out at just the same place; but any extra time such a class may have may well be spent upon some more intensive work during the last half of the eighth-grade program.

In the larger school system where there is efficient supervision the combined use of the special promotion and the semiannual class movement is probably best. Where the supervision is efficient and special cases are handled judiciously, there will be very little trouble about delinquents.

Some have advocated the plan of parallel streams throughout the school, so that all pupils may move ahead by subjects. This is easy enough in the high school where the almost universal practice is to promote by subjects. In the lower grades, however, where the school arts are uppermost, this is not so simple a matter. It is greatly

simplified in schools where the grammar grades work on the departmental plan.

There is good reason to believe that with especial care in the matter of judging pupils' work throughout all grades on some such basis as has been described above for high schools, it will be found entirely practicable to manage the forward movements of pupils under a good working classification by taking care of the specials all the time and of the residuum semiannually.

## IX. GRADUATION

There comes a time in every school where the last period following the last forward movement is completed. At this point the prevailing custom is to graduate the pupils. This is an important occasion both for the school and for the individual. In fact it concerns more or less deeply the whole community. To the school it means the loss of a group of pupils who have come to represent in the school the results of four or more years of training. In this respect they are, or may be, one of the chief incentives to persistent effort on the part of lower classes in the school. More than this, they stand to the community and to the world as illustrating what the training and influence of that particular school is worth. On this account it is desirable that a high standard of work be made the basis for such stamping of public approval as graduation signifies. Nothing so weakens the work of a school as to permit graduation on the part of those who have not done the prescribed amount of work in a satisfactory manner. In such cases certificates may be given indicating the exact nature and amount of work accomplished, but the diploma of the school should go only to those who have fully and satisfactorily completed all requirements.

To the individual the completion of the high school curriculum marks a more or less abrupt change in his outlook on life. Whether this completion of a high school course is to close his school days or to be followed by further preparation at college, the individual is done with the home school, and very likely with the home surroundings, as things go in American life. In either case his success or failure must rest largely in the genuineness of the preparation which his home school has afforded him. There is no time for reconsideration.

To the community at large this change may mean the gaining of good citizens fairly equipped for their duties as such. It may mean the loss of many young and growing members going out to seek a better field of action or further study. Or it *may* mean a sense of the comparative futility of the effort put forth in maintaining a high school when little remains at the end in recompense for the outlay, and, as in case of many individuals, the sacrifice which this effort has cost.

The occasion, then, is an opportunity, where the school conditions are right, and may well be utilized by school authorities for impressing those things which lie closest to the interests of education.

#### PROBLEMS SUGGESTED FOR FURTHER INVESTIGATION

1. An investigation as to the extent to which present practice in grading high school work is purely quantitative.
2. A study of the present methods in use of conducting high school examinations.
3. To what extent is provision made in our high schools for enabling the naturally strong students to do their best ?
4. An examination into the practice of marking pupils on daily recitations, (*a*) as to its justness, and (*b*) as to its effect on the recitation.

5. A study of the present tendencies in regard to high school graduation.

**References.** — "Promotions and Examinations in Graded Schools," E. E. White, published as "Circular of Information," 1891, by Bureau of Education; "Examinations, Grades, and Credits," J. McKeen Cattell, *Popular Science Monthly*, 66: 367; "Standard Examinations for Non-College Pupils," *School Review*, 14: 754; Articles in N. E. A. Reports as follows: "Examinations as Tests for Promotion," H. S. Tarbell, 1887, W. H. Maxwell, 1890; "Examinations for Promotion in the Public Schools," W. DeW. Hyde, 1889; "The Use and Control of Examinations," A. T. Hadley, 1901; "Promotions and Grading," W. W. Chalmers, 1899; Report of Committee on Examinations, 1886. "A Rational System of Education and Promotion," Garber, *Education*, 27: 288-302; "Liberating the Lower Education," Hartwell, *School Review*, 15: 436-458, also same author, pp. 184-196.

## CHAPTER XIII

### RELATION OF THE HIGH SCHOOL TO COLLEGES AND UNIVERSITIES

THIS is a natural sequence to the discussion of the preceding chapter and offers some very good grounds for special consideration here. The whole matter of college entrance requirements and of what the high schools should do in the case is before us. Just at the present time opinions in regard to these requirements differ widely among different types of institutions so far as the colleges and universities are concerned. The great majority of the larger high schools, situated in communities where there are widening local demands placed upon them, are insisting upon a wider recognition of high school work, including what have been called vocational subjects. Taken all together the situation is one calling for earnest deliberation on the part of those who have to do with the administration of the two types of institutions involved. As Professor Thorndike<sup>1</sup> has pointed out, there is need for the scientific study of the problem of college entrance.

The conditions urge haste, but the importance and far-reaching influence of the decisions to be reached render too great haste in our conclusions a real danger. The traditional development of the standards which have heretofore been set up by the colleges are stubborn things. Whether this stubbornness is to the interest of right or

<sup>1</sup> See *Science*, 23: 839-844.

wrong is a matter on which no one can, as yet, do very much more than to dogmatize.

### I. HISTORICAL SURVEY OF ENTRANCE REQUIREMENTS

In order to get the problem before us let us take a brief survey of the historical development lying back of the whole matter. Up to the beginning of the nineteenth century the requirements for entrance to college in this country were a knowledge of Latin, including the ability to translate about what is now covered by a four-year high school course; a knowledge of ordinary Greek, such as the Greek Testament; and, with most colleges, a knowledge of arithmetic. With the exception of Harvard these requirements of the colleges changed but little during most of the first quarter of the nineteenth century.

The preparatory schools of the time were grammar schools and academies. According to Broome<sup>1</sup> the subjects taught in the academies were about as follows: "The 'three R's,' English grammar, Latin, Greek, geography, algebra, geometry, natural philosophy, astronomy, music, composition, oratory, bookkeeping, logic, and virtue."

The organization of the Boston English High School in 1821 marks the initiation of a movement which was felt at the same time by the colleges. This was an economic movement due to the rapid development which came as a sequence to national independence. It was a movement similar to that which led to the establishment of the *Realschulen* in Europe, and is paralleled to-day by the movement due to the results of the application of science to modern industries. The pressure of this movement became so strong that by about the middle of the nineteenth century the colleges were most of them offering parallel courses

<sup>1</sup> "College Admission Requirements," p. 41, note 2.

which showed a strong tendency toward the broadening of the college curriculum in the interests of the practical needs of the people.

Then came the rise of the state higher institutions providing for the training of men in the more fundamental technical lines, as agriculture, engineering, law, medicine, commerce.

Meanwhile the high schools were multiplying. Boston was followed in 1838 by Philadelphia. Others came rapidly, and by 1860 Dr. Harris tells us there were forty high schools in the country. In the ten years following this number was quadrupled; and by 1880 the number had reached 800. Now there are several states having half that number or more. We have already traced the rapid changes in the high school curriculum in the first chapter.

From the original one-course plan of the high school the development first to parallel courses and then to wide election in order to meet the insistent local demands has been very rapid. The colleges have sought to adapt themselves to the new demands by offering parallel courses, with wide election, and with the granting of several degrees where at first only the Bachelor of Arts degree was given. Among these new degrees, with considerable variation among institutions as to definitions and requirements, have appeared the degrees of Bachelor of Philosophy, Bachelor of Letters, and Bachelor of Science. The tendency is now to confine these to the A. B. and B. S. degrees with a much greater uniformity of definition. This has been one of the means adopted by the colleges in order to provide a way for those trained in the broader curriculum of the high schools to get into college. The result has been a tremendous strain upon all educational resources.

## II. THE PROBLEM BEFORE THE HIGH SCHOOLS

Meantime, the colleges have advanced rapidly the quantity of work required for college entrance. These requirements have risen from the equivalent of eight or nine units to from fourteen to sixteen units of high school work. This means practically everything in a complete four years' course in the high school. In the face of these advancements, which apply alike in quantity for nearly all college courses, the high schools are now confronted with a strong popular demand for a much wider range of work in vocational subjects. Commerce, the manual arts, agriculture, and domestic science are calling for a place in the schools of the people.

There is general agreement that the public high school, in whatever it offers, should give an equal chance to all. If this is done, then these various vocational lines must be offered in each high school or system of schools, under a unified organization. Such a plan is bound to bring some confusion in results as measured by present standards of college entrances.

## III. WHAT IS TO BE THE ATTITUDE OF THE COLLEGES?

In the face of this new aspect of the problem which they have been compelled to face, undoubtedly at a disadvantage so far as the real immediate advancement of their work is concerned, during the last three quarters of a century, what is to be the attitude of the colleges? Are the interests represented in college preparation, on the one hand, and preparation for a vocation, on the other, so widely at variance that a common ground of agreement

may not be found? Is President Hadley, for instance, justified in saying that "we may as well recognize the fact that there is a real conflict of interests between the pupils that are not going any further and those that are?"<sup>1</sup> By making the program of studies to meet the demands of our social and industrial life, are we thus to impede the way for the many because we believe that they are not likely to seek admission to college?

More and more the country is looking to the high schools as the preparatory schools of the universities. We readily recognize the double function of these schools, although there is a definite tendency toward equalization of the numbers who do not go to college after the high school and the numbers who do. Suppose the colleges prescribe eleven or twelve of the units required for entrance. Would there be any distinct loss to the college student who might fill in *any* four or five additional units if the work was well done in the high schools? Let us take some imaginary cases. Here is a college which is strictly literary, holding to the classical basis for the A. B. degree. Suppose such an institution should prescribe the following: English three units, mathematics three units, Latin four units, science one unit, history one unit, thus making twelve units. Would it make any material difference what the other four units of high school work might be if only the training were thorough and sound?

Take another case of a modern science and arts course leading to the A. B. degree. Let the college prescribe three units of English, three units of mathematics, three units of modern language other than English, two units of science, and one unit of history, thus

<sup>1</sup> In "Fundamental Requirements of School Education."

again aggregating twelve units. Need there be any anxiety whatever as to the other four units, provided they are well taught?

A similar course, with, perhaps, some slight variation, arranged as a technical course leading to the degree of B. S. will bring us to a similar conclusion. In each of these hypothetical cases there may be opportunity for four years of vocational study, or one fourth of the entire group in the high school program. Are not the four years of training with the maturity and the power acquired about the most important thing? How many things learned in the high school are absolutely essential to the beginning of courses in the freshman year of undergraduate work in the best of our universities? We may grant elementary mathematics, a good secondary training in English, with at least enough of foreign language to have mastered the essentials of grammar and to have acquired a fairly good foundation for a vocabulary. All other lines of work may be as well or better begun in the college if the student has working ability and is sufficiently mature in mind.

#### IV. PRESENT PRACTICE OF STATE UNIVERSITIES

The following facts in regard to the present practice of ten state universities of the North Central group with regard to entrance requirements will show plainly the present situation in such institutions. These tables are compiled from the catalogues of these schools issued in 1908:—

TABLE I  
ENTRANCE REQUIREMENTS FOR THE COLLEGE OF LITERATURE,  
SCIENCE, AND ARTS

UNIVERSITY OF	UNITS REQUIRED FOR ADMISSION	UNITS PRESCRIBED						ELECTIVE	
		ENGLISH	MATH.	FOR. LANG.	HISTORY	SCIENCE	TOTAL	NO. OF UNITS	VOCATIONAL SUBJECTS
✓ Illinois <sup>a</sup> . . .	15	3	2½	3	1		9½	5½	Manual Training 1, Commercial Geography ½
✓ Indiana . . .	16	3	3	3	1	1	11	5	Any taught in High School
✓ Iowa . . .	15	3	2½	2	1		8½	6½	Arithmetic 1, Bookkeeping 1, Industrial Hist. ½
Kansas . . .	15	3	2½	3	1	2	11½	3½	None
✓ Michigan . . .	15	3	3	2		1	9	6	None
✓ Minnesota . . .	16 <sup>b</sup>	No prescriptions						16	Any taught
Missouri . . .	15	3	2	2			7	8	None
Nebraska . . .	14	2	2½	3	1		8½	5½	Agriculture 1
Ohio . . .	15	2	3	6 <sup>c</sup>	2	2	15	0	None
✓ Wisconsin . . .	14	2	2	2			6	8	Commercial Law ½, Commercial Geography ½, Manual Training or Optional <sup>d</sup> Subject 1

<sup>a</sup>. College of Science is separate and prescribes two units of science, but no foreign language or history.

<sup>b</sup>. Graduates of a four-year course of a Minnesota high school or the equivalent.

<sup>c</sup>. Four may be offered, and an additional two units out of other groups.

<sup>d</sup>. Optional may mean another vocational unit, as in commerce.

**TABLE II**  
**ENTRANCE REQUIREMENTS FOR THE COLLEGE OF ENGINEERING**  
**AND MECHANIC ARTS**

UNIVERSITY OF	UNITS REQUIRED FOR ADMISSION	UNITS PRESCRIBED						ELECTIVE	
		ENGLISH	MATH.	FOR. LANG.	HISTORY	SCIENCE	TOTAL	No. OF UNITS	VOCATIONAL SUBJECTS
✓ Illinois . . . .	15	3	3			1	7	8	Manual Training 1, Commercial Geography $\frac{1}{2}$
✓ Indiana (Purdue)	15	3	3	2	1	1	10	5	Any taught in High School
✓ Iowa . . . .	15	3	3	2	1		9	6	Arithmetic 1, Bookkeeping 1, Industrial Hist. $\frac{1}{2}$
Kansas . . . .	15	3	3	3	1 <sup>a</sup>	1	11	4	Manual Training 1
✓ Michigan . . . .	15	3	3 $\frac{1}{2}$	2		2	10 $\frac{1}{2}$	4 $\frac{1}{2}$	Manual Training $\frac{1}{2}$
✓ Minnesota . . .	16 <sup>b</sup>	4	3	2		1	10	6	Any taught
✓ Missouri . . . .	15	3	3	2		1	9	6	Manual Training 1, Agriculture 1
Nebraska . . . .	14	2	3	2		1 $\frac{1}{2}$	8 $\frac{1}{2}$	5 $\frac{1}{2}$	Agriculture 1, Manual Training 1
Ohio . . . .	15	2	3	6 <sup>c</sup>	2	2	15	0	None
✓ Wisconsin . . .	14	2	2 $\frac{1}{2}$ <sup>d</sup>	2		1	7 $\frac{1}{2}$	6 $\frac{1}{2}$	Commercial Law $\frac{1}{2}$ , Commercial Geography $\frac{1}{2}$ , Manual Training or Optional <sup>e</sup> Subject 1

a. Free-hand drawing instead of history.

b. Four-year high school course.

c. Four may be offered, and an additional two units out of other groups.

d. All are required to pass an examination in algebra.

e. Optional may mean another vocational unit, as in commerce.

If we look further in the announcements of these same universities, we shall find that they offer elementary courses in modern languages, science, and history that are open to students of sufficient maturity without any previous study of these subjects. These facts all go to show that state institutions are already inclined to take the best average results of what the high schools can do even where they are organized without reference, primarily, to preparation for college work.

#### V. THE PROBLEM OF PREPARING TEACHERS

But there is another very important consideration entering into this problem. Suppose it be granted that, aside from the English, mathematics, and foreign language, it does not matter so very much what other subjects are presented if they are equally well taught; how are we to do it? From mediæval times and the days of the Renaissance Latin and Greek and mathematics, if taught at all, have been comparatively well taught. The reason is obvious. A great part of the effort of the colleges and universities has gone to the production of good training in these subjects. In other words it is a case of educational heredity.

On the other hand, practically all who discuss and deplore the weaker standards that have come to the colleges in these later days, as a result of the multiplying of new high school courses, acknowledge the weakness to have been, not in the subjects themselves, but in the teaching of them.

And so it is to-day. There is a woeful lack, even yet, of good teachers of history, the sciences, modern languages, and English. What shall we say of manual training, drawing, business subjects, agriculture, and domestic science?

The colleges and universities to which we must look for the training of such teachers are scarcely equipped for such work at present; and even if they were, there are not enough seeking such training to meet the demand.

Again the reason for the lack is not hard to find. The very industrial development which has called forth this interest in and demand for the more practical things in education is attracting more and more of our young people away from teaching and other literary professions into the great fields of activity which are being opened up to the technically well educated. We cannot force people to become teachers. It must be a voluntary movement; and if we are to have a sufficient number of volunteers, we must find the means for stimulating young men and young women to a desire to teach.

It is all very well for the large vocational high schools to talk about the ultra-conservatism of the colleges; but what are the colleges to do? Their own students are clamoring for efficient guidance in a score or more of new and rapidly developing fields. Practically every newer line of college work is more or less crippled for the want of a sufficient number of capable instructors. The vast wealth that is being heaped up because of the application of science and a higher grade of skill to the development of natural resources mostly flows away from the schools and colleges.

In view of these facts, may we not very fittingly advise patience? Or shall we crowd these new matters forward at the expense of thoroughness and efficiency in their teaching? There are very few who would not agree to the proposition that even these vocational subjects may receive college credit if the courses are well organized and well taught. The chief problem is in the teaching; and until

that problem is solved, no amount of concession by the colleges can make much of this newer work creditable.

## VI. NEED OF THE STUDY OF VALUES

There is room here in the meantime for a careful overhauling of educational values. In this work the high schools and universities should coöperate, as they are already doing in many instances. The organizations of these two interests in the Middle states and Maryland, in the North Central group, and in the South, to say nothing of numerous state conferences, furnish just the opportunity needed for such investigations.

## VII. THE DETERMINATION OF FITNESS FOR ADMISSION TO COLLEGE: THE NEW ENGLAND' BOARD

Another phase of the relationship between colleges and high schools is that of the method of determining the basis on which the graduates of high schools are to be admitted to college. At present there is considerable diversity in practice. The New England Association of Colleges accepts certificates from approved high schools. The board bases its approval chiefly upon the record made by students coming from those schools. This is good as far as it goes, although not, of itself, sufficiently broad to be just.

## VIII. THE ENTRANCE EXAMINATION BOARD

Another well-known plan is that of the examinations set by the College Entrance Examination Board of the Middle states and Maryland. By this plan one examination serves for all institutions coming under the jurisdiction of this board. So far as entrance by examination is concerned, this represents a great step in advance of the old method

of individual examinations by each of the colleges and universities belonging to the group included in this scheme.

The arguments for and against entrance examinations have been too frequently repeated to call for an extended notice here.

The chief arguments in favor of the examination test are: 1. It makes possible the application of practically absolute uniformity of standards. 2. It calls for great care and exactness in preparation. 3. It opens the way to each and every individual who is qualified to pass it, no matter in what school or by what means he has prepared himself. 4. It puts the student on his mettle. The arguments against such a test are: 1. It frequently leads to artificiality of preparation, and puts the stress on good memory work rather than on thoroughness of training. 2. It leads to a real waste of time in preparation. 3. It places the chance of success in answering a few questions above the estimate of the teacher who has had many opportunities of testing. In this it is apt to be unfair to the individual.

#### IX. THE SYSTEM OF ACCREDITING BY INSPECTION

A third method which has grown up in the North Central states and is rapidly spreading to the South and West is the system of inspecting and accrediting schools. There are two ways, especially, by which this inspection is managed: First, and most commonly, it is done by the faculty of the state university or by an official inspector from the university. Second, inspection of high schools is made a function of a state board through an inspector appointed by such board.

Where the inspection is done through the university it makes a closer coöperation possible between the two insti-

tutions, a coöperation which is helpful to both. Indeed, it may be asserted that there is no other method by which the complete articulation of the high school and the university can be so satisfactorily accomplished. Assuming, as we have throughout these pages, that education is a growth proceeding from below upward, how better can the university ever really feel the limitations and the possibilities of the secondary stage of this growth? Again, assuming that one of the great functions of the college and the university is to carry forward that research which may ultimately give us the principles of a real science of education, how can this work be so well accomplished as by maintaining that closeness of contact and recognition of mutual interests which such a relationship makes not only possible but necessary?

The chief grounds for the establishment of state inspection independently of the state university are: 1. The fear that the latter institution will dominate the high schools to their hurt by subverting them from their proper sphere. 2. The general claim of conflict of interests among educational institutions and the consequent disadvantage to these other interests of such an arrangement. 3. The need of a classification of high schools as a basis for the distribution of state aid.

As to the first point it is probably true that where the inclination of the state university has been to adhere to the independent university type there has been some cause for such feeling. The present willingness and desire of the state universities to take their places as organic factors in the state systems to which they belong has been too frequently demonstrated in recent years to leave any just ground for complaint.

If there is any reason for the second assumption, the

best possible way to eliminate it is to get together and invoke those higher and larger interests of education, the proper conserving of which calls for a voluntary rather than enforced coöperation.

The third point is best answered by calling attention to the vicissitudes of state politics as compared with the more constant and truly conservative character of a university. The use of such an argument, in favor of inspection from a political department rather than from an educational center, would seem to run counter to much that we have learned through experience in this country.

This point may not be passed, however, without a word in regard to the most notable case of inspection by a state of which we have any experience in any commonwealth supporting a typical state university. With a non-political board like that of Minnesota, and with an inspector with such a personality as has there brought great honor to the office, the limitation to this plan just mentioned above could never arise.

#### X. PURPORT OF ARGUMENT STATED

Let no one mistake the purport of the argument here made for inspection and accrediting through universities. The plea is in no sense intended to favor university control and domination of the situation. It is made entirely in the belief that, in the long run, the highest interests of education would thus be conserved, especially in those states having a state university system. It seems quite evident, for instance, that the situation in New England calls for quite a different adjustment. With no central state institution to lead in the work any state would probably find it desirable to organize state inspection through a State High School Board, a State Board of Education, or the State

Department of Education. In these cases a situation exists which puts the problem on a different basis. •

Further, it should be said that any system of accrediting carried on by the state through its university should be conducted on a broad basis of coöperation and helpfulness to all the educational interests of the state. The university inspector should in no sense be looked upon as an educational "drummer" for his institution. His attitude toward all other institutions having an interest in the preparatory relationship of high schools should be broad, cordial, and free from any suspicion of any inclination or desire to discredit such interest. The results of his findings through inspection should, as far as possible, be made available to the educational public. On the other hand, no system of state inspection, or of entrance examinations, can ever free the state university from that educational responsibility which will still demand its close affiliation with the public schools, and especially the public high schools.

#### PROBLEMS SUGGESTED FOR FURTHER INVESTIGATION

1. A comparative study of the entrance requirements of state and non-state colleges and universities.
2. An investigation of the relative effectiveness of the teaching of the older and the more recent subjects of the high school program.
3. A similar comparative study of educational values as a basis for the definition of units of credit.
4. A study of the systems of inspection in Massachusetts, New York, Michigan, and Minnesota.

**References.**— "Educational Reform," Eliot, especially the chapters on "The Gap between Common Schools and Colleges," and "A Wider Range of Electives in College Entrance Requirements"; "Education of the American Citizen," Hadley, especially chapters on "The Fundamental Requirements of School Education," and "The Use and Control of Examinations"; "A Historical and Critical Discussion of College Admission Requirements," Broome; "Vocational Studies for College Entrance," Part 1 of Sixth Yearbook, National Society for the Scientific Study

of Education; "Report of Committee on College Entrance Requirements of the N. E. A.," Proceedings, 1899; "The Social Mind and Education," G. E. Vincent; Papers on "The Secondary Schools and the Colleges," also "President's Address," in Proc. 20th Annual Convention Association of Colleges and Preparatory Schools of the Middle States and Maryland; "College Entrance Examinations," Bergen, *Science*, 23: 981-982; "An Empirical Study of College Entrance Examinations," Thorndike, *Science*, 23: 839-845; "Is the Course [in Biology] for College Entrance Requirements Best for those who go no Farther?" Needham, *Science*, 19: 650-656; "Conditions of Admission to College, McLean, *Science*, 23: 645-650; "College Entrance Examination Board," Seventh Annual Report of Secretary, *Educational Review*, 34: 272-316; "Is the Present Method of Granting Certificate Rights to Preparatory Schools Satisfactory?" Davis, *School Review*, 15: 145-152; "Standardizing of New England High Schools," Young, *School Review*, 15: 134-154 and 278-283; "Defects of College Entrance Requirements," *Nation*, 85: 372.

## CHAPTER XIV

### THE BUSINESS SIDE OF HIGH SCHOOL ADMINISTRATION

STRICTLY speaking the entire field of school administration belongs to the realm of business. In making use of the phrase "business side" we have in mind a more restricted application. This would include the daily routine of the school, all records and reports of the school, all statements of supplies needed, all records of moneys passing through the hands of pupils, teachers, or principal as a result of the activities of the school or as tuition, all correspondence in any way directly related to the equipment and progress of the school.

#### I. NECESSITY FOR SYSTEM

As a rule both principal and teachers are kept pretty busy by the routine of school work. This makes it essential that the daily routine as well as all business records and transactions be arranged in the most complete and systematic manner possible. One of the first of these problems to present itself is the satisfactory arrangement of the daily program of exercises.<sup>1</sup> Much of the success of the work will depend upon the right adjustment of this schedule of the daily routine. Of course the problems presented by the smaller high schools are as nothing compared with those of the larger ones. It is when a school

<sup>1</sup> See Appendix H for copies of daily programs as in actual use in various types of Illinois high schools.

begins to approach the five hundred mark, and the number of teachers becomes correspondingly large, that the real trouble begins.

## II. ORDER OF ARRANGEMENT OF CLASSES

However, there are some elements to the problem shared by all alike. One of these is that of the best order of arrangement of subjects. With reference to study periods the program should avoid that arrangement which would bring the recitation on a given subject immediately after its preparation. There is danger that pupils with quick memories will depend upon their ability to remember everything without much thought. The method of the teacher will regulate this to some extent.

As to what subjects to put in a certain part of the day's exercises, there seems to be no general agreement. Probably this is true, that the earlier morning and afternoon hours are best where mental acumen and vigor of thought are required. There is little doubt but that the morning hours are best for experimental work such as is required in the physical sciences. It is also safe to assume that fatigue will diminish as the exercises from hour to hour become more varied. Monotony of work either in study or recitation should therefore be avoided.

## III. LENGTH OF PERIODS

The length of recitation periods should be at least forty minutes in the clear, *i.e.* there should be extra time allowed over and above the forty minutes for movement of classes. Subjects requiring laboratory work and manual arts work should, if possible, be provided with double periods. It may not be necessary to use these double periods daily, but the subjects should be so placed on the program as

readily to admit of their use when needed. This will frequently raise a serious question in connection with the brief mid-session recesses which are generally given in smaller schools. It is sometimes found necessary, for instance, to make one extra period do service for two science subjects in providing for double periods. Thus three consecutive periods assigned to the two subjects make it possible to give double periods to each for half the time. In order to accomplish this, it will be seen that where a recess is given it would be necessary either to arrange for three periods before or after a recess period or else require the science classes to omit recess on laboratory days. A very common practice is to omit recesses altogether, and to shorten the session, especially in the afternoon.

#### IV. DIFFICULTIES IN CASE OF ELECTIVES

As soon as a school is large enough to offer electives in the program of studies, another difficulty arises, — a difficulty which is likely to be more serious in a moderately large school than in a very large group. This difficulty grows out of conflicts; and where classes are sufficiently large to require several sections of course the difficulty is diminished. On this account the principal of a high school enrolling from three hundred to five hundred will need to study out the daily program very carefully indeed, in order to adjust the work so as to cause the least possible loss to individual pupils. Irregularity of work on the part of a very few pupils will usually add new complications to such a problem.

#### V. QUESTION OF THE SINGLE SESSION

In the case of the larger high schools and some smaller ones, such as township schools in populous localities, the

question of the single session will present itself. Where many of the students have a long distance to go, the alternative arises of a single session closing at about one o'clock, or a double session with provision for warm luncheons to be served at the school. Both of these methods are in use in different localities, and both have their advocates among schoolmen who have studied the problem. On the whole, the two-session plan with lunch-room arrangements seems to be most in favor. This plan offers a much better opportunity to look after the interests of individual pupils and to keep up all sides of the work. The conditions for study at the school are probably better than in a large proportion of the homes represented, and many students are saved from an idleness that might be worse than wasteful, especially in the city.

#### VI. CONSULTATION WORK AND "CHECKING UP"

Besides the regular schedule of study and recitation work, provision is also to be made for consultation work by pupils with teachers, by pupils with the principal, and by teachers and parents with the principal. Not all these things can always be confined to schedule time; but provision for them by regular schedule will greatly simplify matters and thus avoid much loss of time by some or all of those interested. In all these things, the trite reminder that the "school exists for the pupils" is applicable.

Besides the things already mentioned both teachers and principal will need a time somewhere for the daily "checking up." This work should be done at the school. In fact it is quite desirable from every point of view that teachers and principal should learn to leave all school cares behind them when they have closed the regular routine of the day, unless, perhaps, an hour or two of

reading or study in preparation for the further progress of the work of classes in the case of teachers; and either some progressive movement in school administration, or as preparation for helpfulness to some teacher, on the part of the principal.

## VII. BUSINESS CORRESPONDENCE

Most of the business records and transactions come under the direct care of the principal in his office. This is particularly true of the business correspondence of the school which has to do with such matters as text-books, teachers, laboratory supplies, library books, general school supplies, lectures and addresses, and all such similar interests pertaining to the life and activities of the school as naturally fall to the principal for arrangement or execution.

Wherever important business transactions are involved, copies of this correspondence should be preserved. In case of smaller schools and slight correspondence these copies may be made in handwriting; but if this phase of office work becomes at all extensive, a letter book and press should be provided and the letters written in copying ink. In the larger high schools it often becomes expedient to utilize the typewriter, and usually some clerical assistance is provided. Such help is needed also in keeping records, preparing copies of questions, outlines, and numerous other papers which are issued from the principal's office. This position of clerk or stenographer calls for a person of about as much discretion as does the position of teacher himself.

## VIII. SCHOOL RECORDS

By far the most important factor in the business details of the high school is that of the school records to be kept.

The general facts and statistics which may be embodied in such records play a very important part in any scientific study of school problems. If any one would discover how inadequate such records usually are for purposes of investigation, let him undertake to collect data on any question relating to school administration. The trouble is that school authorities generally fail to appreciate the relationship which the history of an institution should bear to its further development. As a consequence little or no provision is ever made for the convenient and systematic keeping of school records. School principals and teachers are also often neglectful along these lines. They complain about having to make out long reports. An investigation will usually show that they are quite unprepared to furnish the facts desired because of neglect in keeping records.

We become accustomed to making assertions in regard to educational conditions based on the apparent general trend of things. What we need to do more and more is to collect accurate data and carefully compare and analyze until we have some sure scientific footing for our belief. We have already suggested the necessity of keeping a record of correspondence. For similar reasons a strict account of all moneys received and paid out by the principal in the interests of the school should also be kept. This should include tuition money, receipts and expenditures for lecture courses, commencement exercises, contests, and all social or athletic events. Pupils should be required to render a strict account of all such school interests as may be left largely to the management of student organizations. Under this class would come students' athletic and literary organizations, the business management of high school publications, and all kindred interests.

These things are of vital interest in the life of the school, and it is proper that they become a part of the historical record of the school. It is still more important, perhaps, that pupils form the habit of rendering a strict and orderly account of all such transactions as thus directly interest the school public.

Speaking of historical interests, there should be in every high school a clear record of all notable school events given in sufficient detail to indicate the purpose or occasion, the leading participants, the nature of the event, and the results. This should include copies of all set programs pasted or written into the record. The time will come in the experience of any community when such records will be prized. It could hardly be otherwise in the case of an institution where so many interests center as in the public high school. The principal will, of course, be directly responsible for the proper keeping of these records; but, at least where he has no clerical assistance in his office, he may well enlist the aid of some of his teachers or even of the more advanced pupils.

There should also be kept a complete record of text-books used in the high school, giving name of book and publisher, date of edition, date of introduction, approximately the number required for a class, and the date when use is discontinued. If the reason is also stated for each change of texts made, the record will be all the more enlightening. Such a record will be of value to succeeding principals, and will also, in time, furnish some valuable data concerning the development and endurance of text-books.

Another record which, like records of school events and text-books, is often omitted from the records of a school is a complete register of the teachers of a high school. Such

a register might be made of great value for future reference. It might include the name, age, preparation, and experience of the teacher or principal at the date of first employment. If a photograph could accompany this preliminary record, so much the better. Subsequent additions to the record might include such items as promotions in position and salary, further preparation through special study, notable efforts of a special nature, date and cause for closing service. In connection with this last item there might be a record of resolutions or other expression of the general estimate placed upon the service rendered if in any way worthy of special mention. Aside from any general historic interest which alone would justify such a record, the high order of the service rendered by the successful teacher and the peculiar dependence which one engaged in school work is compelled to put upon such a record as a basis for future promotion makes this suggestion one of more than ordinary importance.

In looking up the records of high schools for the purpose of tracing the development of their courses of study, one is early confronted with the fact that most schools seem to have kept no complete record of the courses in use from time to time. It would seem as though our natural interest in preserving the history of such an institution would prompt us to the keeping of a full record of such an important factor as the program of studies. It is in this more than in any other one factor that we may read the evolution through which our secondary schools have passed.

It has always been the custom to keep some kind of record of pupils. This is a matter which is often badly neglected, however. There are so many to whom a definite record of high school experience becomes important in

connection with future progress in a chosen occupation, or in the further pursuit of an education, that there is no good excuse for failure to keep and preserve it. The essential elements to this record are, first, such as would be included in filling out a registration or enrollment slip, — that is, name in full, date and place of birth, residence, name of parent or guardian, occupation of parent if living; second, a record of attendance, including punctuality; third, a record of scholarship; fourth, a record of character. There should be added to the above, if possible, a record of physical condition on entering school, at various regular periods while in attendance, and at the completion of the course.

There may be still further added such items as answers to questions as to future plans, choice of occupation, etc., although these can hardly be considered essential.

#### IX. METHODS OF KEEPING PUPILS' RECORDS

Probably the best general method of keeping these records of the pupils will be found in the card system. By selecting a rather large card and using both sides, two cards will be found sufficient for all the above-named items except answers to questions and similar matters. These cards, filed alphabetically in suitable cabinets, make the most convenient and flexible system that has yet been devised. By using cards of two colors all may be kept in one tray. If metal trays are provided, they may readily be stored in safe or vault and thus secured against loss by fire.

The card system will also be found convenient for keeping a record of teachers, and might readily be utilized for text-books. Even in matters of discipline the wide-awake principal will find the cabinet file a useful adjunct. For instance, the vertical file, with folder or envelope, may be

used for keeping notes, excuses, written promises, etc., concerning those delinquent pupils who are most frequently before the principal. Such a record may be a very convenient resource with which to confront the pupil, or even the parent, on occasion.

## X. SCHOOL REPORTS

The next thing in importance after the system of school records is the system of reports. These are, of course, closely related to the records either as furnishing data for them or as derived from them. It is therefore desirable in planning a set of blanks for reports to make them harmonize with the records to be kept, and *vice versa*.

The different reports essential to the most successful management of a high school may be grouped under (1) Teachers' reports to the principal, including reports of the attendance, scholarship, and conduct of pupils; reports of pupils having some physical defect; reports of cases of contagion or accident; reports on, or requisitions for, books and supplies needed. (2) Teachers' reports to pupils, including records of attendance and scholarship, and especially any delinquencies. (3) Teachers' reports to parents, chiefly in regard to special matters pertaining to individual pupils. (4) Principals' report to parents, including a summary of teachers' reports on attendance, scholarship, conduct, and such physical defects or immoral tendencies as may be known to him. (5) Principals' reports to the superintendent or board on such matters as may be required by them under the laws governing the management of schools. (6) Principals' or superintendents' reports to the county, state, and national departments, or to colleges and universities with which accredited relations are sustained.

It will readily appear that the completeness of these reports will largely depend upon the fullness and accuracy of the records kept; also that the ease with which they may be compiled will depend chiefly upon the proper correlation of records and reports. In the case of schools with poorly kept or incomplete records the making of a report often becomes a serious task if not an impossibility. This is particularly true if there is a change in teachers, principal, or superintendent, and the later incumbent is called on to make a report involving past records. Like all other matters depending upon attention to details the success of a report must depend upon the faithfulness and orderliness with which the minor items on which it is based have been set down.

In the case of reports on scholarship, when it comes to the consideration of the real value of such reports, much will depend on the method used in keeping the record. It seems almost unnecessary, after what has been said previously in the discussion of examinations, to discuss this matter further. Yet we may stop to consider just what information ought to be given in the report of teacher or principal to parents. If any estimate is to be placed upon the pupil's progress for a given period, it ought certainly to be as just and fair an estimate as possible. Shall it be expressed as so many per cent, or in a word or sentence? Those who contend for per cents believe that this is the simplest and most definite way to express the teacher's estimate of a pupil's progress. If we examine closely into the working of this scheme, however, we shall find that it is often misleading. In the first place, as has been suggested before, most teachers are prone to fall into the habit of making it a mere quantitative comparison of members of the class. Further, if the teacher has made an

estimate of a pupil in the first report which is later found to be a mistake, the fact of the previous estimate will often determine the grade. This is because the correct estimate, if widely at variance with the first report, will demand an unpleasant explanation, and so the teacher may hesitate or even fail to make the full correction.

The thing which most parents desire to know is whether or not their children are doing in a satisfactory manner the work that is required to be done in the process of their education. The purpose of whatever report is sent should be to convey this information as definitely as may be. This can hardly be done by the ordinary method of estimating by per cents. A pupil whose comparative grade is only 70 per cent may have worked much more satisfactorily than one whose grade is 90 per cent. It seems evident that in such cases the parents fail to get the information which the report is intended to convey, and at the same time an injustice is done to both pupils concerned.

The whole matter of scholarship records and reports is very much in need of careful and thoughtful revision in many of our public schools.

**References.** — "Administration of Public Education in the United States." Dutton and Snedden, Chapter 30; N. E. A. Report for 1901, J. M. Greenwood, on High School Statistical Information, pp. 490-499.

## CHAPTER XV

### THE COMMUNITY LIFE IN ITS RELATIONSHIP TO HIGH SCHOOL ADMINISTRATION

VERY frequently of late we hear in educational discussions references to the community life as constituting an important element for consideration in planning high school programs. We are told again and again of the need of adjusting these programs to that general quality which each community is supposed to possess very much after the manner of the peculiar personal qualities of an individual man. This, too, is a question, therefore, which must have its place in a discussion of the more general problem of high school administration.

#### I. EDUCATIONAL IDEALS AND STANDARDS

The first phase of the question which presents itself is the educational ideals and standards held by the people of a given community. To one who is at all familiar with the management of schools an ordinary democratic American community presents some very interesting features in this respect. In the first place it is true that the educational ideals of a community are usually determined by a rather small minority of the group. It frequently happens that while people may look to those of their number who have had the best educational advantages to tell them what is best for the neighborhood educationally, yet when it comes to selecting the board of trustees in whose hands is to be

intrusted the execution of these educational policies, the ordinary forces operative in a community usually determine the selection, rather than any consideration of special fitness. As a natural result it often happens that the real ideals of the community fail entirely of realization; while such sordid motives as a politician's desire to please, or an opportunity to use a position or a contract at the disposal of the board to reward a friend, often determine the fate of the school.

In most neighborhoods two extreme views contend for control. One is this ideal outlook of the few competent ones above referred to. Opposed to it is the conception which the great mass of the people hold in regard to education. Even in communities where the masses are mostly native Americans the dominant idea of schools is very low. Most of the people in such cases had their schooling in the country where one teacher taught everything, and where only the elementary branches were taught. They are, on the whole, well-meaning people; but they are very apt to consider much that is taught in high schools as superfluous. For this reason we find them always opposing anything more than what they would term the absolutely necessary outlay. Likewise when it comes to the employment of teachers, they are bound by the same limitations in regard to the preparation necessary for high school instruction.

In communities where the ideals of the few prevail it is possible to move too far ahead of the majority of the people. In such a case a reaction is very apt to come; men are elected to the board of trustees who represent the mass ideals, and the good work is all undone. In most towns and smaller cities, and sometimes even in large cities, educational interests are rendered very unstable by

reason of such attempts to put in force educational standards too far above the masses. Only a strong centralized school system can do such a thing successfully. The schools of the people must keep the people with them if they are to progress in any permanent sense. Much loss in effort put forth as well as funds expended results from such nullification as comes by the adverse voting of a dissatisfied people. True, the agitation which is sure to follow will have a strong educative influence upon the very people who caused the reaction; but, on the whole, progress appears to be delayed. A wiser course in the administration of schools under such conditions is that one by which it is undertaken to gain ground by degrees, steadily, and to carry along with this gain the training of the public mind to appreciation of, or at least acquiescence in, the innovations thus gradually introduced. There is nothing so well calculated to give stability to an institution as to gain for those who direct its affairs the absolute confidence of the people. It is a common occurrence in the history of the race that the education of the young has had to wait upon the training of their fathers and mothers.

## II. INFLUENCE OF LOCAL INDUSTRIES

Another factor in determining the influence of community life upon schools is found in the industrial situation of any given locality. Each community is stamped more or less emphatically by qualities due to its prevailing industrial activities. Indeed, we may say that the educational ideals of a community are apt to be determined largely by the same factor. This influence may be expressed, first, in the form of population; and, second, in the form of the more or less direct relationship which the prevailing industry may bear to the instruction offered in the high

school. The population may be too large for the wealth of the community. In such a case the schools are likely to be poorly equipped and badly crowded. Such conditions are almost sure to arise in mining or manufacturing districts where large numbers of common laborers are required who represent comparatively small additions to the wealth of their communities. It is in just such cases, also, that population often becomes an adverse factor in determining public policy in regard to schools. This is all the more true because often a large proportion of this population of laborers is foreign, and so not in sympathy with our institutional life.

It would seem as though where such populations must be permitted to assemble the state might somehow find a way to extend aid in maintaining good schools in order to protect public interests without endangering the interest of the people in participation. There would certainly seem to be other things besides police regulations in which the state should be able to exercise discretionary power in the protection of our institutions against loss or damage.

The influence which the industrial life of a community exerts upon the actual work of the school is not so marked, usually, as one might expect. This is probably due to the persistence of traditions in regard to the function and work of the school. At any rate the peculiar needs of these local activities are slow in making themselves felt by school authorities.

### III. FEELING THAT SCHOOLS SHOULD MINISTER TO THE FUNDAMENTAL INDUSTRIAL NEEDS

There is a general and growing belief among many teachers, as well as among captains of industry, that the school should minister more definitely to the needs of those

who are likely to engage in the fundamental national industries. Thus it is felt that agriculture should be taught in the schools of an agricultural people; commerce in those of a commercial people; and the manual arts in those of a manufacturing people. The thought is that the more general training of the high school as it now exists should be directed along lines more in accord with the needs of a given community and accompanied by some training to skill along a definite line of manual or other industrial activity such as is likely to be most needed in the particular community to which the school ministers. At present the tendency is to introduce courses in business and manual training, agriculture and domestic arts; but this movement is very slow, owing partly to lack of funds, partly to the difficulty in getting suitable teachers, and partly to local conservatism.

Among some leaders in educational thought conservatism has taken the form of a fear lest by thus permitting industrial types to fix upon the schools corresponding types of education, we may gradually develop an industrial caste system similar to that of European countries. These same leaders contend that a good general education with a limited amount of training along some industrial line is the thing to be desired; but that the industrial training should be solely for its educational value, without any thought of fitting for the particular vocation which that form of industrial training might suggest.

#### IV. INFLUENCE OF SOCIAL CUSTOMS AND STANDARDS

Social customs and standards also reflect the community life; and their influence upon the life and work of the high school is often very marked, and from the point of view of the educationally ideal, very often hurtful.

Such influences may be summed up under the following heads: Home conditions and customs as coöperating with or hindering the student's pursuit of his school tasks; ideals and standards as to various social functions for the young, and the hours they are to keep during school days; the treatment of youthful love affairs; the attitude of the wealthier classes toward the training of their boys and girls to habits of industry and of simplicity of dress; the reading habits of the community and their effect upon the selection of books for public libraries; the estimate which a community puts upon the advantages of a higher education than that furnished by the high school.

Home conditions are apt to stand in a contradictory relationship to the student's opportunity and inclination to study. It very frequently happens that the most unfavorable conditions exist in what would readily be classed as the best homes; while just as frequently the most humble homes, where conditions seem least favorable, are the homes of those who are persistently studious. This is partly due, of course, to the inclination of the student himself to apply all his spare moments to study; but usually the home atmosphere has much to do with it. The very same differences are apt to cause ideals and standards as to the social life of youthful members of the family to be most antagonistic to the cultivation of studious habits in the homes of the well-to-do. In many of our high schools the dominant element is this same "social set"; and in such cases the influence is so strong as almost to nullify the efforts of the teachers to maintain a high standard of scholarship and interest in the legitimate purposes of the school. Even the school itself is sometimes turned into a means of furthering the mad whirl of social events. The

teachers themselves are drawn into the whirl, and thus led to take a sufficiently complacent view of the situation to permit the students to "pass" their examinations. One of the most needed lessons for our modern prosperous families to learn is that the greatest possible handicap to the young is the idea that for them success in life has already been achieved by their fathers. It is the greater leisure of wealth which ought to bring with it the greater opportunity for achievement. If this is to be the case, the days of study and preparation for such achievement must not be thus squandered. What more unpatriotic thing can a people do?

This social atmosphere in which the school is placed is apt to aggravate, for a time, the inclination on the part of the adolescent to fall in love. It is probably at this point that the greatest harm is likely to come from coeducation in secondary schools. The minds of youth are constantly centered upon the pleasures of association with the opposite sex. Such a succession of experiences follows that the high school graduate is often more thoroughly schooled in affairs of the heart than the average college graduate of twenty-five years ago. This state of affairs, coming from existing social conditions, presents one of the grave problems in the administration of the modern public high school.

It lies largely within the control of the wealthier classes to remedy this social defect. If their own love of luxury and display will admit of it, they may well consider what the consequences are to be. All honor to those parents who, even though possessing great wealth, still insist upon training their sons and daughters to habits of industry and of simple tastes. The inclination to indolence and display on the part of the suddenly wealthy does not stop with

their own class. In the democratic mingling of the public high school it is but natural that many of the children of those in moderate circumstances should be seized with an overmastering desire for the same life of indolence and display. Thus the pressure is brought upon those whose home life is necessarily humble, and many who are utterly unable to do so strain every resource in order to enable their children to secure some social recognition. School authority, where possible, should set its disapproval upon such a condition. If we are to maintain free schools for all, they must be within ready reach of those in the humble walks of life.

#### V. THE READING HABITS OF THE COMMUNITY

Another very definite influence is felt in many communities as a result of the reading habits of those who have any leisure for general reading. It is this class who are apt to determine what kind of books predominate on the public library shelves. If there are numerous literary organizations pursuing studies along the more substantial lines of literature, art, and history, the probability is that the class of fiction which finds admission to the public library shelves will be of a relatively high order. On the other hand, if purely social organizations for the entertainment and pastime of the members predominate, it is to be expected that all the sensational and more or less morally doubtful literature will be available to young and old alike. The effect upon the school is inevitable in either case. In the former instance the literary studies of the school will feel the stimulus from without, and a high standard of excellence will prevail. In the latter case the literary studies of the school will become stale and distasteful to the pupils; slang, catchy phrases, and language of doubt-

ful propriety will prevail, and a morbid taste for the sensational will possess the minds of the school.

## VI. INFLUENCE OF THE WIDER COMMUNITY LIFE

Fortunate, indeed, is that community where high literary standards prevail, where a sensual opulence does not stifle all high scholastic endeavor, and where a considerable number of young men and women look forward to the still higher training of college or university. Where the prevailing educational sentiment is so low as to be willing to stop short even of a full high school training the task of the public school teacher is likely to be thankless enough. It is a matter of common observation, on the contrary, that where a community is constantly sending out a goodly number to seek the advantages of higher institutions, the public school spirit is strong and helpful to the teachers of the school. Frequently it happens that the turning point in the social life of a small school community is on the day when the first high school graduate goes away to college. Immediately the thought of the community centers upon something beyond itself; and even though the thought at first be uncharitable and lead to scoffing, yet, in the end, it will almost certainly result in some new aspiration or higher endeavor for that community.

This brings us to a consideration of the influence of the wider community life, — of the state and country at large, and especially of the college or university. Such influences as have been mentioned above come from this wider field. But there are other influences which conditions existing in a state and nation exert. Educational values are, after all, subject to the influences of the market. High standards of service in state and national affairs will affect the estimate which many, perhaps most, boys will put upon a

thorough education. The more men there are who secure important places through other means than merit, the fewer there will be of the younger generation who will seek such training as merit would demand. Thus the premium which the state puts upon high scholarship and upon the proper education of the young is bound to become a strong determining factor when the latter are choosing what schools they will attend.

One of the means by which the state thus exerts its influence is by fostering and maintaining teachers' training schools, colleges, and universities. These elements of the larger community exercise a very direct and definite influence over the high schools. It is true, of course, that this influence is not all good. For those communities where the social conditions are bad the worst things from the colleges are likely to be first adopted. It is especially in connection with social habits and athletic sports that these undesirable influences get from the college or university to the high school. But there is a larger and better sense in which these higher institutions influence the schools below. They furnish a stimulus to effort, a forward look, which nothing else can supply. They put the administrative forces at their best. This is peculiarly true under the system of accrediting high schools by the state universities of the Central West. Certain standards of equipment and teaching ability are insisted upon. Many things which principals and superintendents are powerless to accomplish alone they are often able to do through the support of the accrediting university.

## VII. COUNTER INFLUENCES OF THE SCHOOL

Little has thus far been said in regard to the counter influence of the high school upon the community life. It

is through the return of high school influence to the homes that much of the interest of the people in a wider educational outlook is engendered. There is little doubt but that much of the activity in the way of organized literary effort among those adults whose school opportunities have been limited, is due to this counter effect of the training of their sons and daughters. A well-ordered and skillfully administered high school is one of the most effective rebukes to the social weakness to which we have referred in this discussion. In spite of the current of influences setting from without, such a high school can do much to uplift the morals, preserve the true democratic spirit, elevate the literary and art standards, to say nothing of purifying the political atmosphere, of the community in which it is located. It may become a beacon light for many a less fortunate community of the state. Its influence upon the university will be as great as that of the university upon itself, — first by the quality of students it sends to the university, and, second, by stoutly maintaining the rights and interests of the majority of its students who will never go to the university against the domination of that institution's requirements in so far as they may be inimical to the rights and interests of such a majority.

But there is a more direct and intimate way in which the community life and the high school may be related. We have found in the discussion of the Life of the School what parents' organizations may do to help in organizing the social life of the high school. These same organizations may be made to serve in many ways toward the mutual helpfulness of the high school and the community. They may find ways and means of enlarging the social outlook of the teachers. This is done by the Oak Park organization previously referred to.

The ideal very properly held up to-day is that the high school should be the social center of the community to which it belongs. All these expensive plants in the form of buildings, laboratories, reference libraries, and gymnasiums should be more fully at the service of all the people. Such a condition of things has already been well established in a number of the larger cities, as in Boston, New York, and to some extent, especially in the evening schools, in Chicago and St. Louis.

The high schools have grown up so rapidly that little thought has been given thus far to the possibilities of thus increasing the usefulness of the school. Gradually, however, public sentiment is shaping in this direction; and we may soon see these educational plants of the people exercising a much wider influence for good. It is notable, for instance, that in a number of rural cities where a great many children from the farms attend the high schools some phases of the science of agriculture are being applied. In some smaller cities the chemical laboratory of the high school is made to do service in the interests of pure food and pure water. And why should not the laboratory for the instruction of youth be permitted to take on this added significance for the pupils themselves? If, as often happens, a good teacher of chemistry in a high school is capable, as a practical chemist, of serving outside interests by his laboratory analyses, why may not the laboratory under his supervision become a great means for municipal betterment?

Wherever such experiments have been tried they have transformed the more or less abstract laboratory science into a real significant interest in the lives of the people, thereby doubling the effectiveness of the science teaching. In a similar manner, so far as possible, other lines of

school work and of school development should be made to touch more closely the community life wherever such contact is possible without strain.

In each small high school community, especially, the public library and the school should coöperate in the interests of education. At Galesburg, Illinois, the Board of Education employs one teacher whose business it is to have charge of the juvenile department of the public library and to see to it that the selections for reading made by the children harmonize as far as possible with the teaching plans of the schools. There are great possibilities in such a plan for the high school if communities would take hold and make use of the means at hand.

Each high school should be made familiar with various plans on foot for civic improvement, and the pupils encouraged to participate in such efforts at public betterment. Recently the designation of one or more teachers as Field Secretaries was proposed by the New York Public Education Society. The function of such an officer was to have specific charge of the economic interests of high school students, in order, among other things, to enable poor boys and girls to find employment such as might enable them to remain longer in school. The mere suggestion of such a plan opens up a very interesting range of possibilities for making the connection between the high school and the needs of life much more real and vivid.

This calls to mind such plans as that adopted by Principal Thompson of the Boston High School of Commerce. The plan in this case is to secure for the boys of the more advanced classes opportunities for service, in some preferred line, during the long summer vacation. These arrangements with employers are made with the under-

standing that they are to pay the boys nothing or whatever they may count the service worth. At the close of the term of service each employer writes to the principal his estimate of the boy he has employed, with such suggestions as to weakness or strength as may serve as a help to the teachers in the further training of the boys. It is needless to add that most of the boys thus employed readily obtain good appointments at the close of their school courses.

In order to accomplish very much toward such a general expansion of high school influence and community reaction upon the school, it would probably be necessary to shorten the hours of teaching service of those who, by reason of special fitness for and interest in such work, might be assigned such special duties. If we may judge by the results obtained through the varied and brief experiments already made, however, the end in view would fully justify such an expansion of function.

#### PROBLEMS SUGGESTED FOR FURTHER INVESTIGATION

1. An investigation of the extent to which community life actually affects high schools: —

- (a) In respect to courses offered.
- (b) In respect to the social life of the school.
- (c) In respect to studious habits and ideals.
- (d) In respect to preparing for higher education.

2. The study of some community with a view to determining the sources and nature of the prevalent educational ideals.

3. An inquiry into the probable effects of the development of high schools which fit directly for local industries.

4. A study of some community with a view to ascertaining what modifying influence the high school has had upon the community life.

**References.**—"School Management," Dutton; "Economy in Education," Roark; "Individuality and the Moral Aim in American Education," Mark; "The Social Mind and Education," George E. Vincent; "Democracy and Social

Ethics," Jane Addams; "The Boy Problem," W. B. Forbush; "Social Education," Scott; "The High School as a Social Factor," N. E. A. Report, 1897, pp. 694-699; "Reading of High School Pupils," Dorey, *School Review*, 15: 299; "The Relation of High Schools to Colleges," Committee Report, N. E. A. Report, 1887, pp. 282-291; "A Decade of Civic Development," Zueblin, especially chapter on the "Training of a Citizen"; see also article in *Charities and the Commons*, 17: 335-343.

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## CHAPTER XVI

### MORAL AND RELIGIOUS TRAINING IN THE HIGH SCHOOL

THERE is one other phase of school discipline which, because of the universally high estimate placed upon it as a function of the school, is deserving of special treatment. This is the training of the young in practical ethics. There is a profound feeling, throughout Christendom at least, that the methods that have thus far been employed have not proven altogether satisfactory. The existence of such a universal state of mind is all the more interesting because it is just as keenly felt in those countries in which the formal religious instruction of the church has prevailed as in this country where public education is distinctively secular. Still another interesting feature of the situation is the fact that in those countries where religious training under church direction has been customary the tendency is strongly towards secularization; while in this country of secular education there seems to be a growing feeling in favor of some kind of religious basis for ethical training.

#### I. THE NEED FROM THE STANDPOINT OF THE STATE

Next to man's general interest in the advancement of the race, and indeed essential to it, is the interest of the state in providing for the development and perpetuation of its own ideals and institutions. It is upon this principle that the state assumes the duty and prerogative of administering education. To this end schools are maintained

out of the public treasury for training the young in intelligence and in those habits of industry and moral conduct necessary to good citizenship.

On the general proposition that it is the right and duty of the state to see to the education of its citizens there is practically universal agreement. To the further proposition that an essential part of this training is ethical training there is common consent. We may even go further and say that we are coming to realize, more and more, the intimate relationship which ethical training bears to effective training in intelligence and industrially. This principle is well expressed in the following words by a prominent German writer on economic subjects:<sup>1</sup> "The progressive development of labor power is, under all circumstances, necessarily dependent upon ethical strength, for personal improvement is always a wearisome task. Whoever possesses no ethical energy succumbs either to the depressing influence of necessity or to the enervating influence of luxury." How better can we account for the two great sources of danger to the social body? On the one hand are those, mostly ignorant and unskilled, who, lacking the moral courage necessary to advancement, yield to grinding necessity, stagger for a time under the load, then join the army of the viciously discontented or stifle their dull despair in dissipation. On the other hand are those to whom, for the same lack of moral stamina, easily gotten wealth becomes a curse, and whose vitiated and vitiating luxury of life adds a most deadly venom to our social ills.

Thus we account for the two prevailing types of depravity, the vicious ignoramus, and the villainously intelligent.

<sup>1</sup> From "Die Arbeitskraft der verschiedenen Völker," by J. Deutsch (quoted from U. S. Com. Report, 1900).

Nor have we far to go in order to find examples of them and of their devastating work upon the cherished results of our efforts toward higher social attainment. While we have been trying to dispose of the ignoramus by educating out the illiterate, we seem sometimes to have forgotten to apply the right preventative to the increase of that class who, knowing enough to do good, yet will to do evil.

## II. THE TWO METHODS HERETOFORE USED

If, then, we are generally agreed that there is definite need of a higher ethical training in connection with our scheme of public education, we most naturally seek to know the best means at our disposal for the attainment of such an end. As we look about us we find at least four instrumentalities which, in the nature of things, are more or less active in the work of molding the moral tendencies and character of the young. These are the home, the church, the school, and that general aggregation of other forces which we may call the community life. We cannot here enter into the particular relationship and efficacy of each of these in producing the results desired. Our immediate concern is in seeking to ascertain the best course to be pursued by the state in remedying the acknowledged defect through those instrumentalities which may be said to be at the state's command.

In the first place, we find that two general modes of procedure have characterized the past organization of modern schemes for public education. The first of these left the teaching of the schools with reference to ethics in the hands of the church. This plan was the traditional one; for modern public education was first promulgated by the church as a means to the teaching of religious doctrine and history. In central Europe this was partially

modified as a result of the Reformation. The complete change came in Germany with the organization of the empire. In France, as we have already seen, the public schools were organized under church domination and continued thus until the present century. In England the schools are still subject to religious instruction by the churches.

The second mode of organizing an educational system was that instituted in the United States by which education was completely secularized, as are now the state schools of France and Germany. Neither one of these methods seems to have proven successful. In the case of the first method the teaching by the church has always lapsed into utter formalism which has produced little if any real change in the moral attitude of the recipients. The general effect is perhaps fairly expressed by a recent English writer on school-boy religion who puts it this way: "I am seriously convinced that the average boy at school is as little influenced by the religion whose forms he is encouraged to observe as if God lived on Sundays only, within the chapel only, in theory only."<sup>1</sup> If this is putting the case too strongly it is still placing the emphasis on the right point by way of explaining the failure of this method.

Turning now to the second method, in France it has been thought necessary, in secularizing the schools, to substitute some formal teaching in the principles of ethics. That is to say that the French people are not satisfied to intrust the instruction of the children in morals entirely to the incidental training of general school discipline. This latter thing is exactly what we have been doing to a very large degree in the United States, and the opinion is very general that the results are not satisfactory.

<sup>1</sup> "Religion of the Schoolboy," Weisse, *Contemp. Rev.*, 85: 697.

### III. STATEMENT OF THE SITUATION

We have adhered strictly to the secular form of public education as consistent with a fundamental principle of our government which forbids any union of church and state. In doing this, however, we have never considered ourselves as being, on that account, an irreligious nation. As a matter of fact, we do distinctly recognize solemn religious obligations in conducting our courts of justice, our national and state legislative functions, and in the induction to office of all our chief officials, both state and national. However, in our zeal to keep out sectarian instruction from our public schools we have sometimes gone to the extent almost of barring religion. We have contented ourselves with saying that this is a thing to be left entirely to the home and to the church, and that the public schools must be satisfied to train only in matters purely moral and intellectual. We have even borne down a little harder on the intellectual than on the moral side, perhaps.

An examination of the facts will readily show that probably a majority of children of secondary school age are receiving little if any moral instruction through the church. Any one familiar at all with home conditions in most of our cities and in some of our rural communities will know that in many of these homes the amount of moral training is a negligible quantity if, indeed, the training is not positively immoral. While it is doubtless true that the percentage of children attending our secondary schools from such homes is comparatively small, yet the total number of high school pupils whose moral training is thus otherwise entirely unprovided for is large enough to become cause for public concern. There is probably no stage in the course of public education where immoral char-

acters can do more lasting injury by contact than during adolescence.

#### IV. NATURE AND TREATMENT OF OUR PROBLEMS

How are we to treat this problem in our secondary schools? Much has already been suggested in preceding chapters. The entire discipline of the school, if right in spirit, exercises a powerful influence in molding moral habit and clarifying moral judgment. This, undoubtedly, is and must continue to be, the chief reliance of the high school for purposes of ethical training. With a wholesome school spirit directed by teachers of strong, positive moral character, what opportunities are offered in the teaching of the various subjects, in the physical training of the students, in the manifold phases of the social life of the school! This is what the French teachers call incidental teaching of ethics, and this did not satisfy them.

Are we to intrust all to these incidental methods of teaching? Some one has said that the chief trouble with incidental teaching lies in the fact that accidental is often mistaken for it. Perhaps this will account for the fact that there is such general dissatisfaction with the results. Possibly the results are all that we can reasonably expect with the constant strain that is put upon the assimilative powers of the schools. But so long as there is a chance for betterment we are bound to seek out and apply all available means.

First there is possible a better use of the so-called incidental means. In our hurry to get results on the intellectual side are we not prone to forget to put due emphasis upon the ethical? In our teaching of history and literature do we develop with sufficient definiteness the fine practical illustrations of moral courage and of

strict adherence to sound principles which these subjects afford? In determining the motives of school discipline and the stimuli to effort on the part of our pupils are we as discriminating in our selection and in the methods of applying as we might be? Do we, by our teaching and by example, inculcate love for the truth, respect and tolerance for the sincere opinions of others, just dealing in all our relations with others? It is possible that more attention to the consideration of the common principles of ethics involved in school work, both in the training of teachers and in planning the operations of the school, would help out the situation.

But what shall we say of formal instruction in ethics? Are the French schoolmen sound in their conclusions? It seems reasonable to conclude that a very brief but sound treatment, setting forth the basic principles of moral conduct, would do something towards helping to a clearer conception and a more correct application of these principles by the boys and girls of our high schools. Here again much depends upon the teacher. We shall probably agree pretty generally, also, that the fundamental principles of religious teaching would be involved in such a presentation. To this, if fairly presented, without the introduction of teachings distasteful to any particular religious sect, there could be no reasonable ground for objection.

As to the use of the Bible in the school there is much diversity of opinion; but no one seems to object to the teacher's exemplifying in his life the vital ethical principles of which it is the great expositor. There is much of the Bible which, if properly edited for the purpose, might be very profitably studied as literature. Such a study, freed from all discussion of sectarian doctrines and from religious cant, could not but prove stimulating to the ethical

judgment and general religious interest of the student. Edward Howard Griggs, in his book on "Moral Education," has pointed out the necessity of knowing the literature and history that is contained in the Bible in order to be able to understand and appreciate much that is found in general literature, sculpture, painting, and all other expressions of life since the beginning of the Christian era. The history of the Jews can scarcely be appreciated without the Biblical record; yet they played a very important part in the history of the ancient world.

These and many other considerations furnish opportunities for making high school pupils acquainted with the most essential features of the Bible without infringement on the right of any one's religious conscience, and with the probable result of stimulating a deeper interest in the underlying religious thought.

## V. CONCLUSIONS

The summing of the whole matter is this: We agree that there is need of more efficient moral training. We agree that in its function of administering education the state should provide for this defect if possible. Shall we quibble about the means while the situation continues to grow worse? Humboldt tells us that "whatever we wish to see introduced into the life of a nation must first be introduced into the schools." If formal ethical teaching will further the work; if religion is, in any important sense, a basis for moral growth, and if moral training is essential to good citizenship, how can we afford to omit any of these from the sum of our teaching?

In the report of a committee appointed by the National Education Association to consider moral education occurs this statement: "The keynote of moral culture is love and

duty." Paul says, "And now abideth Faith, Hope, Love, these three; but the greatest of these is Love." The central force and principle of Christian religion and the keynote of moral education are one. Yes, G. Stanley Hall is right when he says that "if our love is deep, obedience is an instinct if not a religion." Have we not here the gist of the whole matter? There are certain fundamental religious conceptions practically common to all mankind, especially of those types represented in any numbers in our national life. Let a non-sectarian commission carefully enunciate these principles and let them be taught in our schools. At the same time let the Bible stories and accounts which best exemplify and set forth these principles be edited and used as literary readings for all except such few individuals as may, on account of conscientious scruples, object. Further, let greater pains be taken for the inculcation of the principles of righteousness, justice, and charity in all human relationships.

As to religious devotional exercises, in most communities outside the larger cities there will be little if any objection to them. Their influence on the spirit and life of the school where participated in generally by students and teachers alike have seemed to be decidedly good. This is particularly true of the singing of carefully selected religious songs. Some of these songs are inseparably connected with notable movements of the race; some are great national anthems which pour forth profound expressions of prayer or of praise.

To any one who has for a long time been a daily witness to the effect of such exercises there seems little reason for doubt as to both the propriety and desirability of their use in all communities where such a practice does no serious violence to individual consciences.

**References.**— "Democracy and Social Ethics," Jane Addams; "Moral Education," Griggs; "Children's Attitude towards Theology," Earl Barnes; "Moral and Religious Instruction in France," Bracq, *Educational Review*, 23: 325-337; "Principles of Religious Education," Butler; "The Effect of Moral Education in the Public Schools upon the Civic Life of the Community," Thompson, N. E. A. Report, 1906, pp. 42-49; "Social Ethics in the Schools," Bulkley, *Forum*, 26: 615-620; "Relation of the School Studies to Moral Training," Adams, Third Yearbook of the National Herbart Society, 1897, pp. 73-100; "Ethical Training in the Public Schools," DeGarmo, in *Annals of the American Academy of Political and Social Science*, 2: 577-599; "The Relation of School Discipline to Moral Education," Wm. T. Harris, Third Yearbook, National Herbart Society, 1897, pp. 58-72. "The Incidental Method of Moral Instruction," Stickney, N. E. A. Report, 1896, pp. 414-421; "Means afforded by the Public Schools for Moral and Religious Training," Mott, N. E. A. Report, 1906, pp. 35-42; "Moral Training in the Public Schools," White, N. E. A. Report, 1886, pp. 128-148; "Education and Heredity," Guyau, Chapter V; "Report of the Committee on Moral Education," N. E. A. Report, 1892, pp. 759-765; "Religion of the Schoolboy," Weisse, *Contemp. Rev.*, 85: 697; also *Living Age*, 241: 769. "Moral Education Needed," *Education*, 26: 177-178. (Editorial.) "Ethical Function of the School," Sheldon, *Education*, 25: 321-332; "Secular Education in the Interests of Religious Truth," Barrie, *Nineteenth Century*, 59: 1045-1053; "The Making of Citizens," R. E. Hughes; "Youth, its Education, Regimen, and Hygiene," G. Stanley Hall (especially the chapter on Moral and Religious Training in Schools).

## CHAPTER XVII

### HIGH SCHOOL EXTENSION AND THE CONTINUATION SCHOOL

#### I. SPECIAL EDUCATIONAL AGENCIES NEEDED

THERE is a great substratum of life entirely outside of schools and universities where men and women, young and middle aged, are struggling upward through various special educational agencies. In many instances these agencies are obscure and quite unnoticed by those who have come to be recognized as the greater social factors educationally. Like the earthworm they are humble and despised, toiling patiently in hidden and out-of-the-way places; but like the same humble creature again they are causing much of this same substratum to rise nearer to the surface and thus greatly to enrich the productive soil of society.

"Social rescue work," "settlement work," "schools for the out-of-school," are some of the names applied to this work. It is not a recent movement, but a work of love and self-sacrifice which has gone on for many years. In these days it is beginning to attract the attention of more of those who are vitally interested in the betterment of human life, and to call out the sympathy and aid of those who, seeing the great possibilities, seek to aid in the better organization and equipment of these agencies.

## II. MAKING THE SCHOOL A CENTER FOR SOCIAL SERVICE

As one result there is a profound movement to-day throughout France, Germany, and among all English-speaking nations which seeks to make the school a center of general social service. This movement manifests itself in various ways. It has led in some cases to medical and sanitary inspection for schools and the consequent organization of classes for the special educational treatment of defectives. More attention to home conditions has also resulted, with a consequent effort in many cities for better home building among those socially retarded groups usually called "the slums."

Numerous factory schools, and schools established by great commercial houses, through the influence of philanthropic men of affairs, in which young operatives may find opportunity to train for more efficient service, and hence for advancement, are to be counted among the results. The night schools of the Y.M.C.A. are also contributing largely to the work of betterment by offering to numberless young men opportunity for literary, business, and industrial training of all kinds.

Correspondence schools have sprung up, offering invaluable service to many who thus find aid in directing the efforts of their spare time, much of which could not be available for class work even in a night school.

## III. PLACE OF THE HIGH SCHOOL IN THIS WORK

What relationship does the American high school bear to this work? What part should it have in this great social movement of modern life? Long before thought of these things came to the conscious social mind devoted

men and women were preparing the way. Books from school libraries were going out into numerous homes, to be read not alone by the children who received them but by others in the home group whose school days were past. Various scientific and literary organizations were started with the schools as meeting places but participated in by many out-of-school members of the communities in which they were organized. House-to-house meetings of clubs had their beginnings often in the heart of the teacher, with helpful influences thus begun whose value and extent no one can measure.

The university extension idea brought with it a similar movement for high schools, especially in the Eastern states. In this way special classes were organized for various unfavored groups, lecture courses of a more popular nature were offered, and the benefits of the trained teaching and fine equipment of high schools in many cities were thus extended to a larger circle of the community life.

More directly connected with the high school itself are some movements which are of a kindred nature. The broadening of the program of studies through the elective system is an effort to reach the masses. Growing out of this has appeared the possibility for those who desire a still more extended preparation in the home school of taking one or more years of work beyond the usual four-year high school program. It is not an uncommon thing now to find pupils returning after graduation to take up some of the subjects offered among electives. Some of the stronger high schools have been able to work out regular fifth and sixth year courses as an inducement to pupils to remain longer in the home school. The results in such cases seem to be very satisfactory, and we are told that

there is no inclination to drop back where once the experiment has been tried.

#### IV. INFLUENCE OF THE HIGH SCHOOL ON ELEMENTARY SCHOOLS

One of the most decided influences upon the school itself of this general modern movement toward utilizing the socializing influence of the high school is to be found in the extension of its influence downward to the elementary schools. By this means these schools are often provided with the same quality of teaching as are the secondary grades. The teachers also are better able to plan the continuous and logical development of their special subjects. The chief loss to the pupils is the constant personal care of the same teacher, not always a loss either. The loss to the teacher, equally doubtful, is the broader view of the materials of education which the teaching of a wide range of subjects is believed by some to afford.

Along with this extension downward of the departmental plan of organization goes also the application of some of the methods of teaching and discipline of the secondary school. Such a result is especially desirable for the seventh and eighth grades. The pupils of these grades are entering upon the adolescent stage of their development and therefore call for treatment similar to that of the ninth to twelfth grades. It is quite common to hear that teachers of these two grades of the elementary school have trouble in getting along with them. There is little doubt but that this trouble is largely due to the fact that the methods of teaching and discipline employed are not well suited to the age of the pupils of these grades.

This leads to another consideration in connection with this phase of high school extension, and that is the intro-

duction of high school subjects lower down. There are not wanting a goodly number of schools where this is already regularly practiced. Nature study, or elementary science work, and a much broader treatment of history work than that formerly characteristic of elementary schools are among the important results. Elementary algebra and geometry, foreign language work, and the reading of English and American classics, are also among the means for this enrichment, from above, of the elementary program.

The plea for a six-year program beginning with the seventh grade is the logical outcome. As has been suggested in another chapter, however, the mere ordering of the program is not so important if the work itself is being done, and by competent teachers. Given a school with a modern elementary program, and with the seventh and eighth grades working on the departmental plan, and there you have it.

## V. THE EVENING HIGH SCHOOL

The one factor which is coming most decidedly to the foreground of present-day activities for high school extension is the evening high school. This, with the night schools of the Y.M.C.A. and Y.W.C.A., the correspondence schools, and the schools established by manufacturing and business firms, constitute the continuation schools of America, corresponding to the *Fortbildung Schule* of Germany.

The first free evening high school established in this country was opened in Cincinnati, Ohio, in October, 1856.<sup>1</sup> In 1903-1904, as shown by the United States Commissioner's Report, there were 32 cities in which were con-

<sup>1</sup> Jones, "The Continuation School in the United States," p. 98.

ducted 39 evening high schools employing 426 teachers and enrolling 40,568 pupils. The great majority of these pupils gathered into the evening high schools are native Americans or foreign-born people who are lacking in the rudiments of an education, but who are seeking this training as a means of increasing their earning power. Quite a respectable number, however, are bright young men and women who have had to quit school to go to work at the end of their elementary school days or after one or two years in high school. Naturally those of the latter class accomplish most. They are frequently working to enter college, although many of them have no further design than to be able to improve their prospects for advancement in business or in the arts. For the most part the pupils of the night schools select those subjects most directly related to the work they are doing. In this respect everything thus far in the experience of high school work seems to point to a strong demand for regular trade schools for the out-of-school classes.

For instructors in these schools regular high school teachers who volunteer are usually employed, although it frequently becomes necessary to go outside of this group in order to get enough to do the work called for.

Shortness of hours and irregular attendance greatly hamper the work of the night school. In Europe the civil authorities compel attendance, but in America it is necessary to substitute interest of the pupils for compulsion. As a result teachers in these schools must be selected as far as possible because of their special adaptability to the work.

## VI. TENDENCY TO A MORE GENERAL USE OF THE CONTINUATION SCHOOL

The continuation school is just beginning to find recognition as one of the elements in public education destined

to render an ever increasing amount of service. It furnishes a way for those who, as bread winners, would still gladly profit by the education of the schools if possible. There is every reason to hope and believe that in time they will become a regular and permanent feature in our public system of education. Such schools may become useful to rural as well as urban communities. With the progress of the consolidation of rural schools and the consequent organization of high school groups in these central schools, the evening school may be the means of placing their advantages at the disposal of young men and women who are compelled to give the day to farm and home service. In the early days of the West it was not uncommon for the youth of the country to take advantage of night schools in writing, spelling, and singing during the long winter evenings. Why may they not, in these later times, utilize these spare hours for training in the elementary sciences of agriculture and of the household?

At present the problem of financing these enterprises is the great stumbling block. But as gradually the idea of the larger high school district, corresponding to the larger ministration of the high school, becomes effective, this difficulty will disappear, both for city and country. It is fair to assume that every wide-awake superintendent of schools, and high school principals, as well as all other school authorities, will be keeping in touch with the movement in this particular phase of secondary work, and planning to meet the problem it presents as they come to realize it for their own communities.

## PROBLEMS SUGGESTED FOR FURTHER INVESTIGATION

1. A study of the secondary work done by Y. M. C. A. schools.
2. An investigation into the efficiency of correspondence schools as related to secondary education.
3. A study of the secondary night school work of any great American city.
4. The high school as an educational center for the out-of-school.

**References.**— "High School Extension," D. S. Sanford, in *Atlantic Monthly*, 81: 780; "Extension of High School Influence," Stratton D. Brooks and Charles H. Morss, *Educational Review*, 29: 433 and 441; "Schools for the Out-of-School," H. V. Ross, *Review of Reviews*, 34: 315-321; "Public School as a Center of Social Service," *Education*, 25: 378; "High School Extension," J. Stanley Brown, *School Review*, 13: 15-18; "The East End Student," *Living Age*, 248: 499-502; "Culture and Education," Rein, *Forum*, 22: 693-702; "The Continuation School in the United States," Arthur J. Jones, Bulletin No. 1, 1907, U. S. Bureau of Education; see also bibliography in this bulletin, pp. 145-149.

## CHAPTER XVIII

### THE OUTLOOK

IN the preceding pages we have passed in review, very briefly to be sure, most of the elements which enter into the problem of secondary school administration. It seems fitting now that we make a brief résumé of the present situation, running over the chief educational motives that seem to be at present operative, and summing up the ideals and tendencies which most concern us here in America.

#### I. THE EDUCATIONAL SITUATION IN GENERAL

The whole civilized world is in a state of educational ferment. The rapid development, witnessed by the last three decades, of international trade interests; the perfection attained in means of interchange of thought; the influence of the great world-universities of Germany, France, England, and America in the unifying of man's great fundamental problems of life and of social order; the great international expositions; the reaction, each upon the other, of the Old World and the New because of the vast stream of migration from the Old to the New with all that this means in the way of intercommunication, as well as because of the constant stream of visitors to the Old World from the New, — all these, say nothing of numerous other minor influences, are sufficient to explain this ferment, this centering of the whole world's interest in the school. Nor is it remarkable, under such circumstances,

that all the great world powers are thinking of about the same things in a general way, and each in its own way and with its own limitations is trying to make the forward move.

## II. THE SITUATION IN GERMANY

In Germany the educational reform movement is seen chiefly in the conflict between the ancient classics which have so long dominated the secondary program and the natural sciences and modern language, including English. By act of Emperor William II. in 1900 applying to Prussia, the three classes of schools, *Gymnasien*, *Realgymnasien*, and *Realschulen*, were placed on an equal footing with reference to university preparation. Important changes were also made in the curricula of these schools, looking toward giving a much larger place to scientific and technical interests. Another element of the present struggle for reform in Germany has to do with the education of girls. In a few cities courses in schools of the same grade as the *Gymnasium* and *Realgymnasium* have recently been opened to girls; but the progress made is very slow and thus far relates chiefly to providing a sufficient number of women qualified as teachers.

For some time the excessive length of study hours in proportion to time given to recreation has been recognized by many German teachers, and efforts have been made to remedy this defect. Many new games, including football, have been introduced, but with moderate success. The pressure brought to bear in order to meet the examinations is almost prohibitive of such a movement.

As a result of overpressure in the schools the students turned out, while remarkably strong in their knowledge of humanistic subjects, yet lack greatly in the power of

initiative, in individuality and resourcefulness, such as characterize students from English and American secondary schools.

In a more material way there is said to be great need of hygienic reform in the secondary schools. Reference has already been made to the long hours without recreation. If we add to this a rather prevalent unsanitary condition with reference to buildings and grounds, we shall have a fair view of the situation in this respect. This is not to be understood as contradictory to a similar reference to German schools in Chapter IV., p. 58. The statement there refers to inspection, with special reference to physical examinations of pupils. Here we have in mind the unsatisfactory conditions due to poorly constructed and overcrowded buildings. There is active effort along this line for betterment.

### III. IN FRANCE

Recent reforms in the secondary education of France have sought to change the central aim of education from the enlargement of the mental powers solely so as to include the direction of conduct and the development of character. This change is well expressed in a recent article by Compayré, who says:<sup>1</sup> "More and more our secondary teaching is turning toward realities and breaking with really formal studies. Hitherto, too much heed was paid to making accomplished wits; more thought was given to eloquence of style than to positive knowledge. People have come to understand that modern society demands other qualities, that the utilitarian point of view must not be slighted even in secondary schools."

We see here a very close parallel to the movement in

<sup>1</sup> *Educational Review*, 27: 29-35, a translation by Holbrook.

Germany. The recent struggle between state and church seems to be very largely a part of the more general breaking away from the old ultra Latin school type of education. Other points mentioned by Compayré as indicating recent tendencies in France are: The introduction of manual training and athletics into the program; a lessening of the strictures of discipline, giving a larger freedom as an aid to the development of strength and individuality in character; the introduction of some formal instruction in elementary ethics. It is believed by French teachers that this latter is needed in order to give shape and definiteness to the incidental instruction in morals in connection with other subjects. The introduction of such formal teaching in morals is doubtless to be considered as, in a sense, a concession. It is made all the more expedient on account of the recent complete separation of the public schools from the religious instruction of the church.

We should not neglect to mention the fact that France is rapidly developing a fine system of trade schools where both principles and practice are taught. Moreover, in her system of secondary schools for girls France has the best yet to be found anywhere in Europe. These schools are on an equality, as to the curricula, with the boys' *lycée*, and open the way directly to university courses for women, especially at Paris, Grenoble, and Lyons.

#### IV. IN ENGLAND

In England the movement as it concerns secondary education is not so clearly defined as on the continent. This is due largely to the fact that at the very first effort at reform the Englishman is confronted with such a tangle of affairs in the general educational organization that this is

necessarily made the first point of attack. There is no doubt, however, that he is awake to the need of reform. The educational bills of 1902 and 1906 together with the appointment and work of the Mosely Commission furnish evidence of this awakening. So far as the great secondary schools are concerned it must be affirmed that they have many points of superiority. What the Englishman wants is a secondary school for the masses that may prove as effective as those of any country. While it is a little early as yet to judge fairly as to what the effect of the present reform movement is to be upon secondary education in England, still it seems evident, from the nature of the investigations now under way, that the chief objective point is the same as in the case of continental Europe.

#### V. TENDENCIES IN THE GROWTH OF OUR HIGH SCHOOLS

When we consider the fact that the public high school, as such, in the United States is less than a century old, the growth to which this type of secondary education has attained is certainly remarkable. We have found that there were in 1880 about 800<sup>1</sup> of these institutions in the entire country. In 1890 the number reported was 2526. Indicating the growth by five-year periods down to the middle of the present decade we find the following: 1885, 4712; 1900, 6005; 1905, 7576. This makes a growth in 25 years of about nine and one half times the number in 1880.

During the seven years from 1890 to 1896 the increase in the number of public secondary pupils was 87 per cent. Taking the growth in the number of high school pupils by sexes through the five-year periods from 1890-1891 the figures are as follows:—

<sup>1</sup> See Chapter XIII., p. 216.

	Boys	GIRLS	TOTAL
1890-1891 . . . . .	83,578	123,840	207,418
1895-1896 . . . . .	157,942	222,551	380,493
1900-1901 . . . . .	224,584	317,146	541,730
1905-1906 . . . . .	305,308	417,384	722,692

This shows a total growth of 3.48 times in the fifteen years, with the boys increasing 3.65 times and the girls 3.37 times during the same period.

If we take the number preparing for college in the public high schools for the same period of fifteen years we get the following:—

	IN CLASSICAL COURSES	IN SCIENTIFIC COURSES	TOTAL	OUT OF AN ENROLLMENT OF
1890-1891 .	12,788	12,270	25,058	207,418
1895-1896 .	29,222	23,375	52,597	380,493
1900-1901 .	33,164	27,263	60,427	541,730
1905-1906 .	36,151	29,842	65,993	722,692

Here we see a growth in classical courses of 2.83 times and in scientific courses of 2.43, making the total increase in the number preparing for college 2.63 times. It would seem from these tables that the increase in the number preparing for college has not kept pace with the growth of high school enrollment. At the same time, the growth in the number pursuing classical courses is slightly greater than the number pursuing scientific courses. An interesting phase of this high school development is the fact that in 1907 there were forty manual and industrial training public high schools in the country with an enrollment

of 13,800, as against fifteen schools and an enrollment of 4892 in 1905.

An equally interesting comparison is found in regard to the relative growth of public and private secondary schools. We are told that in 1887 the number of secondary pupils in private academies and preparatory schools still exceeded those in public high schools. For the five-year periods beginning with 1890 we find the following comparative enrollment:—

	PUBLIC SCHOOLS	PRIVATE SCHOOLS
1890 . . . . .	211,596	98,400
1895 . . . . .	350,099	118,347
1900 . . . . .	530,425	188,816
1905 . . . . .	697,702	107,207

Thus the public high schools, which, in 1887, enrolled fewer students than the private secondary schools, eighteen years later enrolled 6.5 times as many as the private schools.

The figures for the above statistics are taken from the reports of the United States Commissioner of Education. It is to be presumed that, owing to incomplete returns, these figures do not always tell the whole or the exact truth. Enough of the real state of things is revealed, however, to indicate both the magnitude of the growth of our public high schools and some of the important tendencies of this growth. It is certainly not to be expected that with such vast increase in so brief a period of time the typical secondary school of America should present a very settled condition. Yet a careful comparison of schools in different sections of the country shows a sur-

prising degree of unity of plan in the most important features. This state of things may be accounted for chiefly through two influences which are far-reaching and powerful: The admission requirements of the colleges, and the unifying which has come through the discussions and committee reports of the National Education Association and the numerous other educational bodies, both sectional and state.

## VI. PRESENT OUTLOOK WITH US

The present outlook with us presents a situation which, in its main features, is not unlike that of Europe. Here we are seeking earnestly for a sound philosophical basis for an all-sided education of such a nature as to correspond to our social and economic needs. The prevailing thought is that, while we should seek to retain all that is really essential in the so-called cultural side of education, we must make a place in our secondary programs for the motor activities and for vocational training. We are profoundly conscious of a weakness in the coördination of our elementary, secondary, and higher schools. This is a matter for special consideration in all our seeking after educational soundness.

In the training of secondary teachers we are far inferior to continental Europe and scarcely on a par even with England. This whole subject of the training of teachers is in a state of experimentation and ferment the outcome of which is bound to be good.

In a material way we are in some respects better off than the rest of the world. But even here appearances are apt to be deceiving. We are almost entirely lacking, as yet, any provision for sanitary inspection of school properties and medical examination of pupils. Our high

schools are too frequently overcrowded, both as relates to floor space and as to the ratio of the number of teachers to the enrollment of pupils. In all movements looking to the betterment of our material conditions we are hampered by lack of funds sufficient to keep pace with the rapid growth in population and the forward movement in our educational interests generally.

## VII. MOTIVES BEHIND THESE EDUCATIONAL MOVEMENTS

From this brief review of the general educational situation we may now turn to a consideration of motives which are behind these great educational movements. These motives are both world-wide and general, and local or national in character.

Among motives which may be called world-wide, by far the most important arises from economic and industrial conditions. The vital relationship existing between economic and educational advancement is coming to be well understood. The frequent reference to this matter by the leaders of thought in all parts of the world is attracting the attention, more and more, of those actively engaged in industrial and economic pursuits. Perhaps no one has stated the case more clearly than has Professor Tews, of Berlin, in an article on "Popular Education and Economic Development," a translation of which has been published in this country.<sup>1</sup> More concrete still is the evidence of a growing recognition of economic and educational interdependence seen in the German Emperor's demand for a more vitally realistic education, or in the French movement toward a liberalized program, or the

<sup>1</sup> See U. S. Commissioner of Education Report, Vol. I., 1900, pp. 723-752.

English awakening to national needs educationally, or in our own strong movement in the direction of industrial training as a part of public school education.

A second motive of world-wide nature, and which may be called a counterpart of the economic motive, we may call the philosophical motive. Everywhere we are seeking to find in psychology a ground for those readjustments which the changes coming about through the action of the economic motive seem to demand. Thus these two motives, coöperatively, are behind the great general educational reform movement which characterizes the present and which is most vitally concerned with secondary education.

The operation of these motives is modified in each country by local national interests or social conditions. The peculiar needs, from an economic point of view, vary with each national situation. The maintenance of national power and prestige, the form of government organization, the condition of the masses as compared with the ruling class, all are operative in determining the nature and direction of reform. Ecclesiasticism, the relation of church and state, the existence of trade-guilds and other social features, must also be accounted for in estimating results.

All nations seem now to be aware that education is one of the most vital instrumentalities for securing their own perpetuity. Mankind has awakened to the fact that the understanding of elemental things in nature, the ability to develop and use the natural wealth of the earth, the intelligent direction of industry in new fields of human endeavor, the uses of history in rightly governing a state, the appreciation of the highest in nature and in the works of man, the growth of the spirit of patriotism and international

sympathy, are all possible through education, and essential to the highest economic and social well-being.

### VIII. AMERICAN IDEALS

America confronts her problems of public education practically free from the encumbrance of Old World traditions. The development of our school system has come spontaneously from the people. France and Germany aim at perfection of organization as well as of product. We aim at enthusiasm, initiative, coöperation. The Old World deals with practically fixed conditions as to society and the character of the population. Our problem is largely one of the assimilation of a great and diversified stream of newcomers. With us the people are the state; *ergo*, a state system of education with us must be a system springing from and maintained by the people.

As we assimilate populations, so we may assimilate to our needs and to the genius of our social and political order all that is best in other systems of education. We need to study to the end that we may the better coördinate our system of schools; that we may properly adjust the high school program; that we may provide the best teachers; and that we may look well to the civic and ethical training of our youth. But in doing all this we may not forget the true nature of the national ideals we thus seek to perpetuate. Do we accept the full significance of the dictum of a government that is "of the people, for the people, by the people"? Or are we already approaching the time when we must say "of the people, for the people, by (some of) the people"? If we are to insist on the former we must learn to come properly to our climax with the stress on "by the people"; and if *by* the people,

how can we escape the conclusion with regard to the line of further development of our schools?

It is easy for us as teachers to become impatient with the slow movings of the masses, and to undertake to project our school system upward by taking from the people more and more of that participation in control through which alone they are ever to come to realize the real meaning of this thing called education which the vicissitudes of human evolution have placed in their hands.

The schoolhouse is coming more and more to be the center of social life and growth in the community. This it will not cease to do so long as the people feel that the school is their own institution, subject to their will; so long as it is really the educational center of the community life. If, then, we are still to say "by (all) the people," we need to be careful to do nothing which shall, directly or indirectly, diminish their sense of participation in the one thing which, above all else, is the sustaining influence of a genuine democracy.

This principle will apply whether we consider it in relation to the control of the school, or in relation to what the school is to teach. No longer can there be any aristocracy of learning in the sense that a broad education is only for a few of the social groups. The broader culture of the schools in the democracy of the future will include both artist and artisan, both literary man and merchant, both statesman and industrial organizer. The common man is everywhere claiming his rights in such education as the high schools can offer; very soon, yes, even now, he is beginning to ask for the higher training as well; and who shall deny this to common men who deliberately build their own schools?

**References.**— "The Making of Citizens," R. E. Hughes; "The Educational System of Germany," Schirbrand, *North American Review*, 183: 376-383; "Educational Troubles of Germany," H. T. Frick, *Nation*, 83: 433; "Educational Movements in Germany," U. S. Commissioner's Report, 1901, Vol. 1, pp. 3-8; "Lycees of France," Hardy, *School Review*, 7: 549-559, and 8: 18-25; "Secondary Education in France," U. S. Commissioner's Report, 1905, Vol. 1, pp. 76-80; U. S. Bureau of Education, Bulletin No. 11, 1906, "The Educational Bill of 1906 for England and Wales."

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# APPENDIX A

## TIME-TABLES OF GERMAN SCHOOLS<sup>1</sup>

### I. TIME-TABLE OF THE GYMNASIA

The brackets indicate the admission of a temporary shifting of the number of hours within the several groups of subjects.

	VI	V	IV	LIH	UIH	LII	UII	LI	UI	TOTAL
Religion . . . . .	3	2	2	2	2	2	2	2	2	19
German, and Historical Tales . . . . .	3 } 4 1 }	2 } 3 1 }	3	2	2	3	3	3	3	26
Latin . . . . .	8	8	8	8	8	7 } 7 6 }	7 } 7 6 }	7 } 7 6 }	7 } 7 6 }	68
Greek . . . . .	—	—	—	6	6	6	6	6	6	36
French . . . . .	—	—	4	2	2	3	3	3	3	20
History . . . . .	—	—	2	2	2	2	3 } 3 }	3 } 3 }	3 } 3 }	17
Geography . . . . .	2	2	2	1	1	1	1	1	1	9
Arithmetic and Mathematics . . . . .	4	4	4	3	3	4 } 4 }	4 } 4 }	4 } 4 }	4 } 4 }	34
Natural Science . . . . .	2	2	2	2	2	2 } 2 }	2 } 2 }	2 } 2 }	2 } 2 }	18
Writing . . . . .	2	2	—	—	—	—	—	—	—	4
Drawing . . . . .	—	2	2	2	2	—	—	—	—	8
Total . . . . .	25	25	29	30	30	30	30	30	30	259

### II. TIME-TABLE OF THE REALGYMNASIA

	VI	V	IV	LIH	UIH	LII	UII	LI	UI	TOTAL
Religion . . . . .	3	2	2	2	2	2	2	2	2	19
German, and Historical Tales . . . . .	3 } 4 1 }	2 } 3 1 }	3	3	3	3	3	3	3	28
Latin . . . . .	8	8	7	5	5	4	4	4	4	49
French . . . . .	—	—	5	4	4	4	4 } 4 }	4 } 4 }	4 } 4 }	29
English . . . . .	—	—	—	3	3	3	3 } 3 }	3 } 3 }	3 } 3 }	18
History . . . . .	—	—	2	2	2	2	3 } 3 }	3 } 3 }	3 } 3 }	17
Geography . . . . .	2	2	2	2	2	1	1	1	1	11
Arithmetic and Mathematics . . . . .	4	4	4	5	5	5	5	5	5	42
Natural Science . . . . .	2	2	2	2	2	4	5	5	5	29
Writing . . . . .	2	2	—	—	—	—	—	—	—	4
Drawing . . . . .	—	2	2	2	2	2	2	2	2	16
Total . . . . .	25	25	29	30	30	30	31	31	31	262

<sup>1</sup> Copied from "General View of Public Education in the German Empire," W. Lexis.

## III. TIME-TABLE OF THE HIGHER REALSCHULEN

	VI	V	IV	LIH	UIH	LII	UII	LI	UI	TOTAL
Religion . . . . .	3	2	2	2	2	2	2	2	2	19
German, and Historical Tales . . . . .	4 } 3 I } 5 I } 4	3 } 4 I } 6 I } 6	4	3	3	3	4	4	4	34
French . . . . .	6	6	6	6	5 } 4 }	5 } 4 }	4 } 4 }	4 } 4 }	4 } 4 }	47
English . . . . .	—	—	—	5	4	4	4	4	4	25
History . . . . .	—	—	3	2	2	2	3	3	3	18
Geography . . . . .	2	2	2	2	1	1	1	1	1	14
Arithmetic and Mathematics . . . . .	5	5	6	6	5	5	5	5	5	47
Natural Science . . . . .	2	2	2	2	6	6	6	6	6	36
Writing . . . . .	2	2	2	—	—	—	—	—	—	6
Free-hand Drawing . . . . .	—	2	2	2	2	2	2	2	2	16
Total . . . . .	25	25	29	30	30	30	31	31	31	262

## IV. TIME-TABLE OF THE REALSCHULEN

	VI	V	IV	III	II	I	TOTAL
Religion . . . . .	3	2	2	2	2	2	13
German, and Historical Tales . . . . .	5 } 6 I } I }	4 } 5 I } I }	5	5	4	4	29
French . . . . .	6	6	6	5	4	4	31
English . . . . .	—	—	—	5	4	4	13
History . . . . .	—	—	3	2	2	2	9
Geography . . . . .	2	2	2	2	2	2	12
Arithmetic and Mathematics . . . . .	4	4	5	5	5	5	28
Natural Science . . . . .	2	2	2	2	5	5	18
Writing . . . . .	2	2	2	—	—	—	6
Free-hand Drawing . . . . .	—	2	2	2	2	2	10
Total . . . . .	25	25	29	30	30	30	169

TIME-TABLES OF FRENCH LYCÉES<sup>1</sup>

CLASSICAL COURSE	ELEMENTARY SECTION			GRAMMAR SECTION			SUPERIOR SECTION			
	Preparatory Class	Class VIII	Class VII	Class VI	Class V	Class IV	Class III	Class II	Rhetoric	Philosophy
French . . . . .	9½	9	9	3	3	2	2	3	4	—
Latin . . . . .	—	—	—	10	8½	5	5	5	4	—
Greek . . . . .	—	—	—	—	2	6½	5	5	4	—
Modern Languages . . . . .	4	4	4	1½	1½	1½	1½	1½	2½	(1)
Mathematics . . . . .	—	—	—	—	—	1½	3	1½	1½	—
Physics and Chemistry . . . . .	—	—	—	—	—	—	—	—	—	4½
Mathematics, Elementary and Natural History . . . . .	2½	3	3	1½	1½	—	—	—	—	1½
History . . . . .	1½	1½	1½	1½	1½	1½	1½	1½	1½	3
Geography . . . . .	1½	1½	1½	1	1	1	1	1	1	—
Philosophy . . . . .	—	—	—	—	—	—	—	—	—	6
Drawing . . . . .	1	1	1	1½	1½	1½	1½	(2)	(2)	(2)
Total . . . . .	20	20	20	20	20	20	20½	20½	20½	18

MODERN COURSE	CLASS I					
	Class VI	Class V	Class IV	Class III	Class II	Division of "Letters"
French . . . . .	6	6	4½	4½	4½	4½
German (or English) . . . . .	6	6	6	3	3	(1)
Second Language . . . . .	—	—	6	3	3	(1)
History . . . . .	1½	1½	1½	1½	1½	1½
Geography . . . . .	1½	1½	1	1	1	1½
Arithmetic . . . . .	2½	2½	—	—	—	—
Mathematics . . . . .	—	—	3	4½	4½	—
Natural History . . . . .	1½	1½	—	—	—	—
Writing . . . . .	1	1	1	—	—	—
Drawing . . . . .	3	3	3	3	3	(1½)
Physics and Chemistry . . . . .	—	—	—	3	4½	1½
Practical Morals . . . . .	—	—	1	—	—	—
Philosophy . . . . .	—	—	—	—	—	6
Political Economy and Elementary Law . . . . .	—	—	—	—	—	2
History of Art and Civilization . . . . .	—	—	—	—	—	3
Bookkeeping . . . . .	—	—	—	—	—	(1)
Total . . . . .	23	23	25	23½	25	24½

<sup>1</sup> Copied from "The Making of Citizens," R. E. Hughes.

## APPENDIX B

PROGRAM OF PHILLIPS ACADEMY ABOUT A CENTURY AFTER  
ITS ESTABLISHMENT<sup>1</sup>

## ENGLISH DEPARTMENT

*First Year :—*

Mathematics: Arithmetic.

English: Grammar, reading, spelling, analysis.

Geography: Political, physical.

History: Ancient.

Physiology.

*Second Year :—*

Mathematics: Algebra, geometry.

English: Rhetoric, declamation and essays, English authors.

History: United States.

Latin: Comstock's lessons and Cæsar.

Botany.

*Third Year :—*

Mathematics: Algebra, geometry, trigonometry.

Natural Science: Mechanics, physics.

Modern languages: French, German.

Latin: Cæsar, composition, Cicero.

History: England.

English: Declamations and essays.

*Fourth Year :—*

Mathematics: Surveying and leveling, analytical geometry, differential calculus.

English: English literature, original declamations.

Philosophy: Mental and moral science.

Natural Science: Astronomy, chemistry, geology.

Civics: Political Economy.

Modern languages: German, French.

## CLASSICAL DEPARTMENT

*First Year :—*

Latin: Lessons (Comstock), grammar, Cæsar, exercises in writing.

Mathematics: Arithmetic.

English: Grammar and analysis, reading, dictations, study of words, declamation.

<sup>1</sup> Compiled from a catalogue of the academy for 1888.

*Second Year :—*

Latin: Caesar, Sallust, Cicero, Virgil, Bk. I, composition, Roman history and geography.

Greek: Grammar and lessons, Xenophon.

Mathematics: Algebra.

English: Readings, college requirements, composition, declamation.

*Third Year :—*

Latin: Virgil, with reviews, composition, Roman history, and geography.

Greek: Xenophon, composition.

Modern Languages: French grammar and exercises, prose selections.

Mathematics: Higher algebra, reviews.

English: Readings, composition, declamation, elocution.

*Fourth Year :—*

Latin: Virgil, Cicero, composition, Roman antiquities, Ovid, Livy, Horace.

Greek: Herodotus, Attic prose selections as basis for composition, Homer, Herodotus, history, geography and antiquities.

Mathematics: Geometry, trigonometry, reviews.

Natural Science: Mechanics, physics, chemistry.

English: Art of composition with exercises, elocution, essays.

Modern Languages: French, German.

## PROGRAM OF PHILLIPS EXETER WHEN FIRST FOUNDED IN 1818<sup>1</sup>

### ENGLISH DEPARTMENT

For admission into this department the candidate must be at least twelve years of age, and must have been well instructed in reading and spelling, familiarly acquainted with arithmetic, through simple proportion with exception of fractions, with Murray's English Grammar through syntax, and must be able to parse simple English sentences.

The following is the course of instruction and study in the English Department, which, with special exceptions, will comprise three years:

*For the First Year :—*

English grammar, including exercises in reading, in parsing, and analyzing, in the correction of bad English, punctuation, and prosody; arithmetic; geography; and algebra through simple equations.

*For the Second Year :—*

English grammar continued; geometry; plane trigonometry and its application to heights and distances; mensuration of surfaces and solids; elements

<sup>1</sup> Copied from Brown's "Making of the Middle Schools," pp. 237-238.

of ancient history; logic; rhetoric; English composition; declamation and exercises of the forensic kind.

*For the Third Year :—*

Surveying; navigation; elements of chemistry and natural philosophy, with experiments; elements of modern history, particularly of the United States; moral and political philosophy, with English composition, forensics, and declamation continued.

#### CLASSICAL DEPARTMENT

*For the First Year :—*

Adam's Latin Grammar; Liber Primus, or a similar work; Viri Romani, or Cæsar's Commentaries; Latin prosody; exercises in reading and making Latin; ancient and modern geography; Virgil and arithmetic.

*For the Second Year :—*

Virgil; arithmetic and exercises in reading and making Latin, continued; Valpey's Greek Grammar; Roman history; Cicero's Select Orations; Delectus; Dalzel's Collectanea Græca Minora; Greek Testament; English grammar and declamation.

*For the Third Year :—*

The same Latin and Greek authors in revision; English grammar and declamation continued; Sallust; algebra; exercises in Latin and English translations, and composition.

*For the Advanced Class :—*

Collectanea Græca Majora; Q. Horatius Flaccus; Titus Livius; Parts of Terence's Comedies; Excerpta Latina, or such Latin and Greek authors as may best comport with the student's future destination; algebra; geometry; elements of ancient history; Adam's Roman Antiquities, etc.

#### THE PROGRAM OF THE BOSTON ENGLISH HIGH SCHOOL FOR 1878 READS AS FOLLOWS:<sup>1</sup>—

*First Year :—*

English—accounts of authors, with study of some of their best works; reading aloud; elementary composition, including practical applications of grammar.

Ancient History.

Latin or French or German.

Algebra.

Principles of Arithmetic.

Botany, after March 1.

<sup>1</sup> Copied from Boston Report.

*Second Year :—*

English.

Medieval and Modern History.

Latin or French or German.

Plane Geometry and Plane Trigonometry.

Bookkeeping or Zoölogy, 1 hour.

Physics, 3 hours.

*Third Year :—*

English—Milton and Shakespeare; reading aloud; essay writing.

Modern History and Civil Government.

Latin or French or German, 4 hours or 3 hours.

Solid Geometry and Mensuration, 2 hours; Physics, 2 hours; Chemistry, 2 hours; Descriptive Astronomy, 1 hour; Zoölogy and Botany, 2 hours (in place of Mathematics).

The above program was subject to a number of regulations in regard to electives.

**PRESENT PROGRAM OF THE BOSTON HIGH SCHOOLS<sup>1</sup>****FIRST YEAR***Prescribed Studies*

Physical Training. (Two points.)

Hygiene. (One point.)

Choral Practice. (One point.)

English I. (Five points.) English and American authors, grammar, composition, reading, speaking and debating.

One of the following: (Four or five points.)

(a) Algebra I., including quadratic equations, *or*(b) Bookkeeping I., including commercial arithmetic, penmanship and commercial forms, *or*

(c) A foreign language (Latin I., French I., or German I.).

*Elective Studies*

History I. Ancient History to the fall of the Western Roman Empire.

Biology I. Botany and Zoölogy, or either.

Manual Training I.

Drawing I.

Music I. (Two points only.) Harmony.

Any subject in the prescribed list in any year may be chosen as an elective in that year.

<sup>1</sup> Copied from programs published by the Board of Education for 1906-1907.

## SECOND YEAR

*Prescribed Studies*

Physical Training. (Two points.)

Hygiene.

Choral Practice. (One point.)

English II. (Four or five points.) Continuation of English I.

*Elective Studies*

History II. Mediæval and early modern history to 1700 A.D.

Mathematics II.

(a) Algebra II, or

(b) Algebra and Plane Geometry, or

(c) Plane Geometry.

Greek I.

Latin II.

French II.

German II.

Spanish I.

Biology II. Botany and Zoölogy, or either.

Physics I.

Manual Training II.

Drawing II.

Music II. (Two points only.) Elementary harmonic analysis, form.

Bookkeeping II.

Phonography and Typewriting I.

Commercial Geography.

Any study in the first year's list not already taken or successfully completed may, with the consent of the headmaster, be taken this year.

## THIRD YEAR

*Prescribed Studies*

Physical Training. (Two points.)

Hygiene.

Choral Practice. (One point.)

English III. (Three, four, or five points.)

*Elective Studies*

History III. Modern European History from 1700 A.D.

Mathematics III.

(a) Algebra and Geometry, or

(b) Solid Geometry.

Greek II.  
 Latin III.  
 French III.  
 German III.  
 Spanish II.  
 Physiology.  
 Physics II.  
 Chemistry I.  
 Household Science and Arts.  
 Drawing III.  
 Music III. (Two points only.) Advanced harmonic analysis, counterpoint, form.  
 Phonography and Typewriting II.  
 Commercial Law.  
 Civil Government.

Any study in the earlier lists not already taken or successfully completed may, with the consent of the headmaster, be taken this year.

#### FOURTH YEAR

##### *Elective Studies*

English IV. Literature, composition, rhetoric, history, and formation of the English language, Chaucer.  
 History IV.  
     (a) The political history of the United States under the constitution, *or*  
     (b) College preparatory history.  
 Mathematics IV. Algebra and Trigonometry.  
 Greek III.  
 Latin IV.  
 French IV.  
 German IV.  
 Spanish III.  
 Chemistry II.  
 Physical Geography.  
 Phonography and Typewriting III.  
 Drawing IV.  
 Economics.  
 Physical Training IV. (Two points.)  
 Choral Practice. (One Point.)

Any study in the earlier lists not already taken or successfully completed may, with the consent of the headmaster, be taken this year.

The points offered for a diploma from one of these schools must include —

- (1) Six points in physical training.
- (2) One point in hygiene.
- (3) Three points in choral practice.
- (4) At least thirteen points in English.
- (5) At least seven points in the same foreign language, *or* in phonography and typewriting.
- (6) At least four points in mathematics *or* in bookkeeping.
- (7) At least three points in history.
- (8) At least three points in science.
- (9) Not more than fifteen points for drawing, household science and arts, manual training, and music combined are allowed to count towards a diploma.

Boston now includes in her list of high schools a High School of Commerce. The program of studies for this school is as follows: —

#### FIRST YEAR

##### *Required*

English.

German.

Penmanship, first half.

Business Knowledge and Practice, second half. }

Physics, one half year. }

Physical Geography, one half. }

Algebra (with commercial applications).

General History, Ancient and Mediæval.

#### SECOND YEAR

##### *Required*

English.

German.

\*French or Spanish.

Bookkeeping.

Commercial Geography, one half year. }

Local Industries, one half year. }

Observational Geometry, first half. }

Commercial Arithmetic, second half. }

##### *Elective (drop starred subject)*

tenography (to be pursued three years).

## THIRD YEAR

*Required*

English.

German.

\*French or Spanish.

Chemistry.

Typewriting.

Modern History, first half. }

Economic History, second half. }

*Elective*

Bookkeeping.

Stenography (continued).

Free-hand Drawing.

## FOURTH YEAR

*Required*

Commercial English, Advertising, Correspondence, first half.

English, second half.

German.

\*French or Spanish.

Algebra (review), one third year. }

Plane Geometry, two thirds year. }

Typewriting.

Commercial Law, first half. }

Civil Government, second half. }

*Elective*

Bookkeeping, Accounting, Typewriting.

Stenography and Typewriting.

Mechanical Drawing.

Commercial Design.

Chemistry, Applications.

Economics, Applications, first half. }

Political Economy, second half. }

## APPENDIX C

### ACADEMIC SYLLABUS FOR NEW YORK SCHOOLS, 1905. ACADEMIC SUBJECTS<sup>1</sup>

#### GROUP I. — LANGUAGE AND LITERATURE

##### *English*

- |                         |   |
|-------------------------|---|
| (4 First-year English)  | 2 English grammar                                   |
| (3 Second-year English) | 2 History of the English language<br>and literature |
| 3 Third-year English    |   |
| 3 Fourth-year English   |   |

##### *Ancient*

- |                                  |                                 |
|----------------------------------|---------------------------------|
| (5 First-year Latin)             | (5 First-year Greek)            |
| 1 Latin grammar                  | 1 Greek grammar                 |
| 1 Elementary Latin composition   | 1 Elementary Greek composition  |
| 3 Cæsar                          | 3 Anabasis                      |
| 4 Cicero                         | 3 Iliad                         |
| 4 Virgil                         | 1 Greek composition             |
| 1 Latin composition              | 1 Translation of prose at sight |
| 1 Translation of prose at sight  | 1 Translation of Homer at sight |
| 1 Translation of poetry at sight |                                 |

##### *Modern Foreign*

- |                       |                        |
|-----------------------|------------------------|
| (5 First-year German) | 5 Intermediate French  |
| 5 Elementary German   | 5 Advanced French      |
| 5 Intermediate German | (5 First-year Spanish) |
| 5 Advanced German     | 5 Elementary Spanish   |
| (5 First-year French) | 5 Intermediate Spanish |
| 5 Elementary French   |                        |

#### GROUP II. — MATHEMATICS

- |                        |                  |
|------------------------|------------------|
| 2 Advanced arithmetic  | 5 Plane geometry |
| 5 Elementary algebra   | 2 Solid geometry |
| 2 Intermediate algebra | 2 Trigonometry   |
| 3 Advanced algebra     |                  |

<sup>1</sup> As published by the New York Education Department.

## GROUP III. — SCIENCE

5 Physics	2½ Physiology and hygiene
5 Chemistry	5 Advanced botany
5 Biology	5 Advanced zoölogy
2½ Elementary botany	5 Physical geography
2½ Elementary zoölogy	3 Agriculture

## GROUP IV. — HISTORY AND SOCIAL SCIENCE

3 or 5 Ancient history	5 American history with civics
3 or 5 European history	2 Civics
3 or 5 English history	2 Economics

## GROUP V. — BUSINESS SUBJECTS

4 Elementary bookkeeping	3 Commercial geography
3 Advanced bookkeeping	2 Business correspondence
2 Business practice and technics	1 Business writing
2 Business arithmetic	3 Stenography (50 words)
2 Commercial law	3 Stenography (100 words)
2 History of commerce	2 Typewriting

## GROUP VI. — OTHER SUBJECTS

2 History and principles of education	Advanced drawing
3 Psychology and principles of education	3 Course one
3 Drawing	2 Course two
	2 Course three
	2 First-year home science
	2 Second-year home science
	2 First-year shopwork
	2 Second-year shopwork

The numerals prefixed to the subjects in the above list indicate the number of lessons a week for a year and also the number of counts to be earned thereby.

### MINIMUM REQUIREMENT FOR AN APPROVED COURSE IN NEW YORK HIGH SCHOOLS

A course of study in a high school or academy to receive the approval of the state Commissioner of Education, as required by chapter 1031 of the laws of 1895, entitled "An act to encourage and promote the professional training of teachers," must include 2880 recitation periods, of which the following subjects must be a part: —

**English.** The course in English must be continuous throughout the four years, and must provide adequate instruction in —

Literature

Rhetoric and composition . . . . 494 hours<sup>1</sup>

Grammar

**History.** The course in history must include the three following courses, each of which should be continuous throughout the year: —

Ancient history . . . . . 114 hours

English history . . . . . 114 hours

American history with the development  
of civic institutions . . . . . 152 hours

**Mathematics.** The course in mathematics must include: —

Algebra (through quadratics) . . . 190 hours

Plane geometry . . . . . 190 hours

**Science.** The course in science must embrace biology (including human physiology) and physics. The laboratory method of teaching these subjects is prescribed.

Biology . . . . . 190 hours

Physics . . . . . 190 hours

**Foreign Languages.** The course in foreign languages must include: —

Latin . . . . . 380 hours

or

French . . . . . 380 hours

or

German . . . . . 380 hours

**Drawing.** The course in drawing must be continuous throughout the four years, and must provide adequate instruction for 228 hours.

Drawing . . . . . 228 hours

**Vocal Music.** The course in vocal music must be continuous throughout the four years, and should provide adequate instruction in sight singing from the staff and the use of common technical terms.

Vocal music . . . . . 152 hours

The number of hours required in each subject is based on a school year of 38 weeks as a minimum.

<sup>1</sup> The term "hour" as used in this course means a recitation period of not less than 45 minutes.

## APPENDIX D

### PROGRAM OF 1863 OF THE ST. LOUIS HIGH SCHOOL<sup>1</sup>

#### I. GENERAL COURSE

*First Year.* Algebra; German or Latin; English Analysis  $\frac{1}{2}$ ; Physical Geography  $\frac{1}{2}$ ; Drawing.

*Second Year.* Geometry; German or Latin; Natural Philosophy  $\frac{1}{2}$ ; Chemistry  $\frac{1}{2}$ ; Bookkeeping  $\frac{1}{2}$ ; Ancient Geography  $\frac{1}{2}$ ; Drawing.

*Third Year.* Plane Trigonometry or Botany  $\frac{1}{2}$ ; Mensuration and Surveying or Zoölogy  $\frac{1}{2}$ ; Spherical Trigonometry and Navigation or Zoölogy  $\frac{1}{2}$ ; Civil Engineering or Botany  $\frac{1}{2}$ ; Physiology  $\frac{1}{2}$ ; Astronomy  $\frac{1}{2}$ ; Latin or French and German; History, Ancient, Middle Ages, and Modern.

*Fourth Year.* Analytical Geometry  $\frac{1}{2}$ ; Calculus  $\frac{1}{2}$ ; Shakespeare  $\frac{1}{2}$ ; Latin or German and French; Intellectual Philosophy  $\frac{1}{2}$ ; Moral Philosophy  $\frac{1}{2}$ ; English Language and Literature  $\frac{1}{2}$ ; Geology  $\frac{1}{2}$ ; Constitution of United States  $\frac{1}{2}$ .

#### II. CLASSICAL COURSE

*First Year.* Algebra; Latin; English Parsing and Analysis  $\frac{1}{2}$ ; Drawing; Physical Geography  $\frac{1}{2}$ .

*Second Year.* Latin; Greek; Geometry  $\frac{1}{2}$ ; Ancient Geography  $\frac{1}{2}$ ; Drawing.

*Third Year.* Latin; Greek History.

*Fourth Year.* Latin; Greek; Shakespeare  $\frac{1}{2}$ ; English Language and Literature  $\frac{1}{2}$ ; Constitution of United States  $\frac{1}{2}$ .

### ST. LOUIS HIGH SCHOOL PROGRAM OF 1874-1875<sup>2</sup>

*First Year.* Latin; Algebra; Physical Geography; Rhetoricals; Drawing.

*Second Year.* Latin; Algebra and Geometry; Natural Philosophy; Rhetoricals; Drawing.

*Third Year.* Latin or French or German; Chemistry  $\frac{1}{2}$ ; Physiology  $\frac{1}{2}$ ; Geometry; Universal History; History of Art.

*Fourth Year.* Latin or French or German or Greek; Trigonometry  $\frac{1}{2}$ ; Constitution of United States; History of English Literature; Shakespeare or Milton  $\frac{1}{2}$ ; Botany; Zoölogy or Geology  $\frac{1}{2}$  or  $\frac{1}{3}$ .

<sup>1</sup> As published in the St. Louis Report for 1863.

<sup>2</sup> As published in the St. Louis Report.

**PROGRAM OF ST. LOUIS HIGH SCHOOL IN 1884-1885<sup>1</sup>**

*First Year.* All study Latin, Arithmetic, Bookkeeping, Rhetoricals, Drawing; and elect Literary German, Business German, or Physiology.

*Second Year.* All study Rhetoricals and Algebra, and elect one of the following courses:—

I. Latin and Physics, Drawing, Shorthand and Bookkeeping, Business German.

II. Latin, Greek, Physics.

III. Latin, Art, Physics.

IV. Latin, Literary German, Physics.

Those not taking I. are allowed to continue drawing.

*Third Year.* All study Rhetoricals, Algebra, and Geometry, General History, and elect:—

I. French, Molecular Physics, and Chemistry.

II. German, Molecular Physics, and Chemistry.

III. Latin, Molecular Physics, and Chemistry.

IV. Latin, Greek.

Drawing optional in this year.

*Fourth Year.* All study Rhetoricals, Shakespeare, English Literature, English and American History, and elect:—

I. German. II. French. III. Latin.

IV. Latin, Higher Mathematics, or Natural Science or Mental and Moral Philosophy, or Laboratory Chemistry or Greek (the boys being allowed to elect two of these studies, and girls one).

Drawing optional in this year.

Choral music throughout the four years.

**COURSES OF STUDY IN THE ST. LOUIS HIGH SCHOOLS  
JANUARY, 1906<sup>2</sup>****I. SCIENTIFIC COURSE**

*First Year.* English, Algebra, Botany (first half-year), Physiology (second half-year)—required; Latin, German, French, and Spanish—alternative.

*Second Year.* English, Geometry, Physics, and History—required; Latin, German, French, and Spanish—alternative.

*Third Year.* English, History, Physics (first half-year), Chemistry (second half-year), and Algebra, and Geometry—required; Latin, German, French, and Spanish—alternative—two required.

*Fourth Year.* English, History, Shakespeare, Chemistry, and Trigonometry—required; Latin, German, French, and Spanish—alternative—two required.

<sup>1</sup> From the corresponding Report.

<sup>2</sup> As published by the Board of Education.

## II. CLASSICAL COURSE

*First Year.* English, Algebra, Botany (first half-year), Physiology (second half-year), and Latin — required.

*Second Year.* English, Geometry, Physics, Greek, and Latin — required.

*Third Year.* English, History, Greek, and Latin — required; German, French, and Spanish — alternative.

*Fourth Year.* English, History, Shakespeare, Greek, and Latin — required; German, French, and Spanish — alternative.

## III. GENERAL COURSE

*First Year.* English, Algebra, Botany (first half-year), Physiology (second half-year) — required; Latin, German, French, and Spanish — alternative.

*Second Year.* English, Geometry, and Physics — required; Latin, German, French, and Spanish — alternative.

*Third Year.* English and History — required; Physics (first half-year) and Chemistry (second half-year), and Algebra and Geometry — alternative; Latin, German, French, and Spanish — alternative — two required.

*Fourth Year.* English, Shakespeare, and History — required; Latin, German, French, and Spanish — alternative — two required; Chemistry, Trigonometry, and Psychology (first half-year), Ethics (second half-year) — alternative.

## IV. ART COURSE

*First Year.* English, Algebra, Botany (first half-year), Physiology (second half-year), and Drawing — required.

*Second Year.* English, Geometry, Physics, and Drawing and History of Art — required.

*Third Year.* English, History, and Drawing and History of Art — required; Physics (first half-year) and Chemistry (second half-year), and Algebra and Geometry — alternative; Latin, German, French, and Spanish — alternative.

*Fourth Year.* English, History, Shakespeare, and Drawing and History of Art — required; Chemistry, Trigonometry, and Psychology (first half-year), Ethics (second half-year) — alternative; Latin, German, French, and Spanish — alternative.

## V. COLLEGE CLASSICAL COURSE

*First Year.* English, Algebra, Botany (first half-year), Physiology (second half-year), and Latin — required; German and French — alternative.

*Second Year.* English, Geometry, Greek, and Latin — required; German and French — alternative.

*Third Year.* English, History, Greek, Latin, and Algebra and Geometry — required; German and French — alternative.

*Fourth Year.* English, History, Shakespeare, Greek, Latin, Physics, Laboratory Physics, and Studies needed for College — required.

#### VI. COLLEGE SCIENTIFIC COURSE

*First Year.* English, Algebra, Botany (first half-year), Physiology (second half-year), and Latin — required; German and French — alternative.

*Second Year.* English, Geometry, Physics, and Latin — required; German and French — alternative.

*Third Year.* English, History, Physics (first half-year), and Chemistry (second half-year), Algebra and Geometry, and Latin — required; German and French — alternative.

*Fourth Year.* English, History, Shakespeare, Chemistry, Trigonometry, and Studies needed for College — required; Latin, German, and French — alternative.

#### VII. COMMERCIAL COURSE

*First Year.* English, Algebra, Botany (first half-year), Physiology (second half-year), and Arithmetic and Penmanship — required; Latin, German, French, Spanish, and Drawing — alternative.

*Second Year.* English, Geometry, Physics, and Bookkeeping — required; Latin, German, French, Spanish, and Drawing and History of Art — alternative.

*Third Year.* English, History, Stenography, Typewriting, Bookkeeping (first half-year), and Commercial Law (second half-year) — required; Latin, German, French, and Spanish — alternative.

*Fourth Year.* English, Shakespeare, History (first half-year), Commercial Geography (second half-year), Civics (first half-year), Economics (second half-year), Stenography and Typewriting — required; Latin, German, French, and Spanish — alternative; Chemistry and Psychology (first half-year), Ethics (second half-year) — alternative.

#### VIII. MANUAL TRAINING COURSE

*First Year.* English, Algebra, Botany (first half-year), Physiology (second half-year), Drawing and Manual Training — required; Latin, German, French, and Spanish — optional.

*Second Year.* English, Geometry, Physics, Drawing, and Manual Training — required; Latin, German, French, and Spanish — optional.

*Third Year.* English, History, Algebra, and Geometry, Drawing, and Manual Training — required; Latin, German, French, Spanish, and Physics (first half-year), and Chemistry (second half-year) — alternative.

*Fourth Year.* English, Shakespeare, History, Trigonometry, Drawing, and Manual Training — required; Latin, German, French, Spanish, and Chemistry — alternative.

#### IX. COURSE PREPARATORY TO TEACHERS COLLEGE

*First Year.* English, Algebra, Botany (first half-year), Physiology (second, half-year), Music, Penmanship, Drawing, and Latin — required.

*Second Year.* English, Geometry, Physics, Music, Penmanship, Drawing and History of Art, and Latin — required.

*Fourth Year.* English, Shakespeare, History, Physiography, Music, Penmanship, Drawing and History of Art, and Latin — required.

## APPENDIX E

### PROGRAM OF STUDIES FOR CHICAGO HIGH SCHOOLS<sup>1</sup>

THE studies are arranged in four lists, corresponding to the four years a pupil is supposed to spend in school.

The first list contains the studies open to a pupil's election in his first year. The second, third, and fourth lists contain, respectively, the studies open to his election in each of the following years.

No pupil will be allowed to pursue a study which is in advance of his attainments.

Pupils will not be allowed to take a study which is a natural sequence of one which has not been successfully pursued. Pupils entering the first year will be expected not to take more than one foreign language, unless able to enter an advanced class in the second language.

Pupils must have been in attendance at least one year before taking up the study of stenography and typewriting.

SUBJECTS	NUMBER OF RECITATIONS PER WEEK	NUMBER OF WEEKS	CREDITS
<b>FIRST YEAR</b>			
English—Classics, Grammar, Composition, and Rhetoric	4	40	.8
Latin . . . . .	4	40	.8
German . . . . .	4	40	.8
French . . . . .	4	40	.8
Spanish . . . . .	4	40	.8
Mathematics—Elementary Algebra, including Quadratic Equations . . . . .	4	40	.8
Science—Physiography . . . . .	6	30	.6
Physiology (required by state law) . . . . .	4	10	.2
Commercial Studies—Accounting, Commercial Arithmetic, Bookkeeping, Business Forms, Penmanship	6	40	.8
Drawing . . . . .	2	40	.4
Music . . . . .	1	40	.2
Physical Culture . . . . .	1	40	.2

<sup>1</sup> As published by the Board of Education, 1908.

SUBJECTS	NUMBER OF RECESSIONS PER WEEK	NUMBER OF WEEKS	CREDITS
SECOND YEAR			
English — Classics, Grammar, Composition, and Rhetoric	4	40	.8
Latin — Cæsar (four books), Prose Composition . .	5	40	1.
German . . . . .	5	40	1.
French . . . . .	5	40	1.
Greek . . . . .	5	40	1.
Spanish . . . . .	5	40	1.
Mathematics — Plane Geometry . . . . .	4	40	.8
Science — Biology, including either Zoölogy 20 weeks and Botany 20 weeks, or Zoölogy 40 weeks, or Botany 40 weeks . . . . .	6	40	.8
Commercial Studies — Stenography and Typewriting .	6	40	.8
Advanced Accounting . . . . .	6	40	.8
Drawing . . . . .	2	40	.4
Music . . . . .	1	40	.2
Physical Culture . . . . .	1	40	.2
History — Ancient History, chiefly that of Greece and Rome, to the Fall of the Western Empire . . .	4	40	.8
THIRD YEAR			
English — Grammar (first half-year), Classics, Rhetoric and Composition, and History of Literature . .	4	40	.8
Latin — Cicero or Virgil, Prose Composition . . .	5	40	1.
German . . . . .	5	40	1.
French . . . . .	5	40	1.
Greek . . . . .	5	40	1.
Spanish . . . . .	5	40	1.
Mathematics — Advanced Algebra . . . . .	4	20	.4
Solid Geometry . . . . .	4	20	.4
History — History of England, particularly England since 1485 . . . . .	4	40	.8
Mediæval and Modern European History, particularly that of continental Europe . . . . .	4	40	.8
Science — Physics or Chemistry . . . . .	6	40	.8

SUBJECTS	NUMBER OF RECITATIONS PER WEEK	NUMBER OF WEEKS	CREDITS
Commercial Studies — Commercial Geography (with special attention to "Commercial" Chicago) .	4	40	.8
Advanced Stenography and Typewriting . . .	6	40	.8
Drawing . . . . .	2	40	.4
Music . . . . .	1	40	.2
Physical Culture . . . . .	1	40	.2
FOURTH YEAR			
English — Classics, Rhetoric and Composition, and History of Literature . . . . .	4	40	.8
Latin — Virgil or Cicero . . . . .	5	40	I.
German . . . . .	5	40	I.
French . . . . .	5	40	I.
Greek . . . . .	5	40	I.
Spanish . . . . .	5	40	I.
Mathematics — Trigonometry . . . . .	4	20	.4
Arithmetic . . . . .	4	20	.4
History — American History, particularly the history of the United States since the Revolution, and Civics	4	40	.8
Science — Chemistry or Physics . . . . .	6	40	.8
Geology . . . . .	4	20	.4
Astronomy . . . . .	4	20	.4
Commercial Studies — Commercial Law, one-half year .	4	20	.4
Economics, one-half year . . . . .	4	20	.4
Drawing . . . . .	2	40	.4
Music . . . . .	1	40	.2
Physical Culture . . . . .	1	40	.2

## MANUAL TRAINING HIGH SCHOOLS

## COURSE OF STUDY

LATIN COURSE	WEEKS	HOURS PER WEEK	CREDITS
<b>FIRST YEAR</b>			
English . . . . .	40	4	.8
Algebra . . . . .	40	4	.8
Physiology . . . . .	10	4	.2
Physiography . . . . .	30	6	.6
Mechanical Drawing . . . . .	40	4	.8
Woodwork . . . . .	40	8	.8
Free-hand Drawing . . . . .	40	1	.2
Gymnasium . . . . .	40	1	.1
Total . . . . .			4.3
<b>SECOND YEAR</b>			
English Literature . . . . .	40	4	.8
Plane Geometry . . . . .	40	4	.8
Latin . . . . .	40	4	.8
Mechanical Drawing . . . . .	40	4	.8
Blacksmithing . . . . .	20	10	.4
Foundry and Pattern Work . . . . .	20	10	.4
Gymnasium . . . . .	40	1	.1
Total . . . . .			4.1
<b>THIRD YEAR</b>			
English . . . . .	40	2	.4
Solid Geometry . . . . .	20	4	.4
Advanced Algebra . . . . .	20	4	.4
Physics . . . . .	40	6	.8
Latin . . . . .	40	4	.8
Machine Shop Practice . . . . .	40	6	.6
Machine or Arch. Drawing . . . . .	40	4	.8
Free-hand Drawing . . . . .	40	2	.4
Gymnasium . . . . .	40	1	.1
Total . . . . .			4.7

LATIN COURSE	WEEKS	HOURS PER WEEK	CREDITS
FOURTH YEAR			
American History . . . . .	20	4	.4
Civil Government . . . . .	20	4	.4
Trigonometry . . . . .	20	4	.4
Engineering . . . . .	20	4	.4
Chemistry . . . . .	40	6	.8
Latin . . . . .	40	4	.8
Machine or Arch. Design . . . . .	40	4	.8
English . . . . .	40	2	.4
Free-hand Drawing . . . . .	40	2	.4
Gymnasium . . . . .	40	1	.1
Total . . . . .			4.9

MODERN LANGUAGE COURSE	WEEKS	HOURS PER WEEK	CREDITS
FIRST YEAR			
English . . . . .	40	4	.8
Algebra . . . . .	40	4	.8
Physiology . . . . .	10	4	.2
Physiography . . . . .	30	6	.6
Mechanical Drawing . . . . .	40	4	.8
Woodwork . . . . .	40	8	.8
Free-hand Drawing . . . . .	40	1	.2
Gymnasium . . . . .	40	1	.1
Total . . . . .			4.3
SECOND YEAR			
English Literature . . . . .	40	4	.8
Plane Geometry . . . . .	40	4	.8
Spanish, French, or German . . . . .	40	4	.8
Mechanical Drawing . . . . .	40	4	.8
Blacksmithing . . . . .	20	10	.4
Foundry and Pattern Work . . . . .	20	10	.4
Gymnasium . . . . .	40	1	.1
Total . . . . .			4.1

MODERN LANGUAGE COURSE								WEEKS	HOURS PER WEEK	CREDITS
THIRD YEAR										
English	.	.	.	.	.	.	.	40	2	.4
Solid Geometry	.	.	.	.	.	.	.	20	4	.4
Advanced Algebra	.	.	.	.	.	.	.	20	4	.4
Physics	.	.	.	.	.	.	.	40	6	.8
Spanish, French, or German	.	.	.	.	.	.	.	40	4	.8
Machine Shop Practice	.	.	.	.	.	.	.	40	6	.6
Machine or Arch. Drawing	.	.	.	.	.	.	.	40	4	.8
Free-hand Drawing	.	.	.	.	.	.	.	40	2	.4
Gymnasium	.	.	.	.	.	.	.	40	1	.1
Total	.	.	.	.	.	.	.			4.7
FOURTH YEAR										
American History	.	.	.	.	.	.	.	20	4	.4
Civil Government	.	.	.	.	.	.	.	20	4	.4
Trigonometry	.	.	.	.	.	.	.	20	4	.4
Engineering	.	.	.	.	.	.	.	20	4	.4
Chemistry	.	.	.	.	.	.	.	40	6	.8
Spanish, French, or German	.	.	.	.	.	.	.	40	4	.8
Machine or Arch. Design	.	.	.	.	.	.	.	40	4	.8
English	.	.	.	.	.	.	.	40	2	.4
Free-hand Drawing	.	.	.	.	.	.	.	40	2	.4
Gymnasium	.	.	.	.	.	.	.	40	1	.1
Total	.	.	.	.	.	.	.			4.9

SCIENTIFIC COURSE	WEEKS	HOURS PER WEEK	CREDITS
FIRST YEAR			
English . . . . .	40	4	.8
Algebra . . . . .	40	4	.8
Physiology . . . . .	10	4	.2
Physiography . . . . .	30	6	.6
Mechanical Drawing . . . . .	40	4	.8
Woodwork . . . . .	40	8	.8
Free-hand Drawing . . . . .	40	1	.2
Gymnasium . . . . .	40	1	.1
Total . . . . .			4.3

SCIENTIFIC COURSE	WEEKS	HOURS PER WEEK	CREDITS
SECOND YEAR			
English Literature . . . . .	40	4	.8
Plane Geometry . . . . .	40	4	.8
Zoölogy or Botany . . . . .	40	6	.8
Mechanical Drawing . . . . .	40	4	.8
Blacksmithing . . . . .	20	10	.4
Foundry and Pattern Work . . . . .	20	10	.4
Gymnasium . . . . .	40	1	.1
Total . . . . .			4.1
THIRD YEAR			
English . . . . .	40	2	.4
Solid Geometry . . . . .	20	4	.4
Advanced Algebra . . . . .	20	4	.4
Physics . . . . .	40	6	.8
Modern History . . . . .	40	4	.8
Machine Shop Practice . . . . .	40	6	.6
Machine or Arch. Drawing . . . . .	40	4	.8
Free-hand Drawing . . . . .	40	2	.4
Gymnasium . . . . .	40	1	.1
Total . . . . .			4.7
FOURTH YEAR			
American History . . . . .	20	4	.4
Civil Government . . . . .	20	4	.4
Trigonometry . . . . .	20	4	.4
Engineering . . . . .	20	4	.4
Chemistry . . . . .	40	6	.8
Machine or Arch. Design . . . . .	40	4	.8
English . . . . .	40	4	.8
Free-hand Drawing . . . . .	40	4	.8
Gymnasium . . . . .	40	1	.1
Total . . . . .			4.9

NOTE.— Students must receive credits of at least four points in each year for graduation.

## EVENING HIGH SCHOOLS

Classes in any subjects taught in the day high schools will be organized in the evening high schools whenever such subjects are called for by at least twenty candidates, such classes to continue until the membership falls below fifteen. Evening schools are open five evenings a week during October, November, December, January, February, and March.

## APPENDIX F

### THE BARNES HIGH SCHOOL LAW OF KANSAS, LAWS OF 1905<sup>1</sup>

Sec. 1. *May receive County Aid.* In every county in the state of Kansas in which one or more school districts or cities of less than 16,000 inhabitants shall have maintained high schools with courses of instruction admitting those who complete the same to the freshman class of the college of liberal arts and sciences of the University of Kansas, the county commissioners shall levy a tax each year of not less than one fourth of a mill nor more than three mills on the dollar of the assessed valuation of the taxable property within such counties for the purpose of creating a general high school fund.

Sec. 2. *Levy made, When.* The first levy shall be made when the result of the election or petition is determined, and a similar levy shall be made each year thereafter: *Provided*, No levy shall be made until one or more such high schools shall have been maintained in the county the preceding year.

Sec. 3. *Funds Collected.* Said tax shall be levied and collected in the same manner as other county taxes, and, when collected, the county treasurer shall pay the same to the treasurers of the school districts maintaining high schools according to the provisions of this act, as required by law, but no part of said general high school fund shall ever be used for other than high school purposes.

Sec. 4. *Apportionment of Funds.* The county treasurer shall pay to the treasurers of said school districts a *pro rata* part of the said general high school fund apportioned to the several school districts according to the average daily attendance of resident pupils of the county in the high schools of each the preceding school year, but no apportionment shall be made to any school district after it has discontinued its high school.

Sec. 5. *Principal shall make Report.* It shall be the duty of the principal of each such high school, at the expiration of the school year, to make a report, under oath, to the county superintendent, showing the total enrollment and the daily attendance of each pupil, and the average daily attendance in his high school for that year, and to furnish such other reports as the county superintendent may require, and his last month's salary shall not be due until such reports shall have been duly made.

<sup>1</sup> From the Kansas School Laws.

Sec. 6. *County Superintendents shall certify to County Clerk.* It shall be the duty of the county superintendent to certify to the county clerk and to the county treasurer, on or before the 25th day of July of each year, the average daily attendance in the several high schools of the county complying with the provisions of this act for the year ending on the 30th day of June preceding, and to certify to the board of county commissioners the amount necessary for the maintenance of such high schools the ensuing year, and the county commissioners shall make such levy (not to exceed three mills on the dollar of the assessed valuation of the taxable property within such county) as may be necessary to produce such amount; and in case the county commissioners shall fail to make such levy, then the county superintendent shall make a suitable levy, and certify the same to the county clerk of such county, who shall enter upon the tax-rolls the levy so made by the county superintendent.

Sec. 7. *Tuition Free.* Tuition shall be free in all such high schools to pupils residing in the county where such schools are located.

Sec. 8. *Courses of Study.* At least two courses of instruction shall be provided, each requiring four years' work; namely, a college preparatory course, which shall fully prepare those who complete it to enter the freshman class of the college of liberal arts and sciences of the University of Kansas, and a general course, designed for those who do not intend to continue school work beyond the high school.

Sec. 9. *Some Cities and Counties Exempt.* Cities having more than 16,000 inhabitants and counties having heretofore established county high schools or which may hereafter establish county high schools under the laws now in force shall be exempt from the operation of this act.

Sec. 10. *When in Force.* This act shall not be in force in any county until its provisions are adopted therein by a majority vote of the electors as herein provided. At the next general election, unless previously submitted, the following proposition shall be submitted in each county or part of county in the state to which this law may apply, viz.: "May the provisions of the high school act of 1905 apply in this county?" The election shall be conducted and such proposition shall be voted on and the votes then canvassed and returns made in all respects as provided by law. Whenever a majority of the voters voting in any county, or the part of any county to which this law may apply, at such election shall be in favor of such proposition, the provisions of this act shall apply in such county from the time such result is ascertained. If the proposition fails to carry at the next general election, it may be resubmitted in each county or part of county in the state to which this law shall apply upon petition to the board of county commissioners by twenty-five per cent of the taxpayers, at any general election hereafter.

## APPENDIX G

### DEFINITIONS OF HIGH SCHOOLS<sup>1</sup>

#### MINNESOTA

THE following are the requisites of a high school:—

1. It shall be in session not less than nine months in the year.
2. It shall admit, free of tuition charge, students of either sex resident in the state, but those only who shall pass a proper examination in arithmetic, spelling, English grammar, reading, writing, geography, and United States history.
3. It shall have regular and orderly courses of study, embracing all the branches prescribed by the state high school board, and requisite for admission to the collegiate department of the state university, and an optional English or business course in addition thereto or in lieu thereof.
4. It shall be subject to such rules and regulations, consistent with the provisions of law, as may be prescribed by the state high school board, and shall be open to visitation at all times by any member of such board, and by any inspector thereof.

#### OHIO

*High School Defined.* A high school is hereby defined as a school of higher grade than an elementary school, in which instruction and training are given in approved courses in the history of the United States and other countries; composition, rhetoric, English and American literature; algebra and geometry; natural science, political or mental science, ancient or modern foreign languages, or both; commercial and industrial branches, or such of the above-named branches as the length of its curriculum may make possible, and such other branches of higher grade than those to be taught in the elementary schools, and such advanced studies and advanced reviews of the common branches as the board of education may direct.

### STATE AID TO HIGH SCHOOLS

MINNESOTA, 1906 Edition of School Laws.

1416. There is hereby appropriated annually out of any moneys in the state treasury not otherwise appropriated the following sums:—

1. For aid to high schools, two hundred and seventeen thousand dollars.
2. For aid to graded schools, seventy-nine thousand dollars.
3. For aid to semi-graded schools, sixty-seven thousand dollars.
4. For aid to common schools, one hundred thousand dollars.

<sup>1</sup> Copied from late editions of the school laws of the different states given.

5. For necessary expenses of high school board, and salaries and expenses of high and graded school inspectors and examiners, ninety-five hundred dollars, to be drawn from the appropriation for high and graded schools in proportion to the amounts respectively apportioned to each.

Such sums, or such part of said sums as may be necessary, together with any further sums appropriated for such aid, shall be available August 1 of each year. ('99 c. 352 a. 28; '03 c. 184 a. 2.) See 1905 cc. 142, 296, 320.

1417. The board shall apportion the amount appropriated for such schools equally among the high schools and the graded schools entitled thereto, but no high school shall receive more than fifteen hundred dollars per year, nor any graded school more than five hundred and fifty dollars per year; nor shall the amount so paid any high school exceed its actual expenditure for such work, exclusive of building and repairs, nor shall any graded school connected with, or in the same district with, an aided high school share in such apportionment. ('99 c. 352; '03 cc. 184, 366.) See 1905 c. 320.

1418. Not more than seven high schools in the same county shall be included in any apportionment, and any high school so included shall receive aid for at least two years, if it continues to comply with the requirements of law and to do efficient work. In case any high school in a county already having seven aided high schools shall apply for aid, the board may admit such school to apportionment in place of the first school that has received such aid for two years. ('99 c. 352; '01 c. 19 s. 1.)

1420. In addition to the amount hereinbefore provided, seven hundred and fifty dollars a year is hereby appropriated out of the general revenue fund to each high school having a four-year course, and organized classes in each of the four grades therein, which shall provide special normal instruction in the common branches. The schools entitled to such aid shall be determined annually by the high school board, and the money paid in the same manner as provided in case of other high schools. ('03 c. 359.)

NEW YORK, the Regents are charged with the apportionment, annually, of about \$550,000 to such secondary schools as have membership in the university and comply with all the regulations established by the Regents.

CALIFORNIA, 1907 Edition of School Laws, acts of 1905 and 1906.

Sec. 1. There is hereby levied annually for the fifty-fifth and fifty-sixth fiscal years, ending respectively June thirtieth, nineteen hundred and four, and June thirtieth, nineteen hundred and five, an ad valorem tax of one and one half cents upon every hundred dollars of the value of the taxable property of the State, which tax shall be collected by the several officers charged with the collection of State taxes, in the same manner and at the same time as other State taxes are collected, upon all and any class of property, which tax is for the support of regularly established high schools of the State. And it is

further enacted that, beginning with the fifty-seventh fiscal year, to wit: July first, nineteen hundred and five, it shall be the duty of the State Controller, annually, between the tenth day of August and the first day of September, at the time that he is required to estimate the amount necessary for other school taxes, to estimate the amount necessary to be levied for the support of high schools. This amount he shall estimate by determining the amount required at fifteen dollars per pupil in average daily attendance in all the duly established high schools of the State for the last preceding school year, as certified to him by the State Superintendent of Public Instruction. This amount the State Controller, between the dates above given, must certify to the State Board of Equalization.

Sec. 2. The State Board of Equalization at the time when it annually determines and fixes the rate of State taxes to be collected, must declare the levy and the rate of tax for the support of State high schools in conformity with the provisions of section one of this Act.

Sec. 3. The money collected as provided in sections one and two hereof, after deducting the proportionate share of expenses of collecting the same to which other taxes are subject, must be paid into the State treasury to be by the State Treasurer converted into a separate fund, hereby created, to be called the "State High School Fund."

Sec. 4. The money paid into the State High School Fund is hereby appropriated without reference to fiscal years for the use and support of regularly established State high schools and is exempt from the provisions of part three, title one, article eighteen, of an Act entitled "An Act to establish a Political Code," approved March twelfth, eighteen hundred and seventy-two, relating to the State Board of Examiners.

Sec. 5. The money in said State High School Fund shall be apportioned to the high schools of the State by the State Superintendent of Public Instruction in the following manner: He shall apportion one third of the annual amount among the county, district, city, union, or joint union high schools of the State, irrespective of the number of pupils enrolled or in average daily attendance therein, except as hereinafter provided; the remaining two thirds of the annual amount he shall apportion among such schools pro rata upon the basis of average daily attendance as shown by the official reports of the County, or City and County School Superintendents for the last preceding school year; *provided*, that such high schools have been organized under the law of the State, or have been recognized as existing under the high school laws of the State and have maintained the grade of instruction required by law of the high schools; *and provided*, that no school shall be eligible to a share of said State High School Fund that has not during the last preceding school year employed at least two regularly certificated high school teachers for a period of not less than one hundred and

eighty days with not less than twenty pupils in average daily attendance for such length of time, except in newly established high schools wherein the minimum average daily attendance for the first year of one hundred and eighty days may be but twelve pupils and but one teacher; *and provided*, that before receiving State aid, each school shall furnish satisfactory evidence to the Superintendent of Public Instruction of the possession of a reasonably good equipment of building, laboratory, and library, and of having maintained, during the preceding school year, proper high school instruction for a term of at least one hundred and eighty days; *provided further*, that the foregoing provisions relating to the average daily attendance and the number of teachers employed shall not apply in any case where by reason of conflagration or other public calamity it shall be, or has been, impossible or impracticable to have or to hold school in any school or school district so affected, for a period of one hundred and eighty days or to have an average daily attendance of not less than twenty pupils. (Amended June 14, 1906; in effect immediately.)

**RHODE ISLAND, School Laws of 1900, Chapter 544.**

Sec. 3. Any town maintaining a high school having a course of study approved by the state board of education, and in the town of New Shoreham any consolidated district provided for in section 1 of chapter 57 of the General Laws, shall be entitled to receive annually from the state twenty dollars for each pupil in average attendance for the first twenty-five pupils, and ten dollars for each pupil in average attendance for the second twenty-five pupils. Any town not maintaining a high school, which shall make provision for the free attendance of its children at some high school or academy approved by the state board of education, shall be entitled to receive aid from the state for each pupil in such attendance upon the same basis and to the same extent as if it maintained a high school by itself.

Sec. 4. All applications for aid under this act shall be made to the commissioner of public schools by the school committee of the town; and said application must be accompanied by the certificate of the principal teacher of the school on account of which the application is made, setting forth the facts relating to the attendance which is made the basis of the application.

**PENNSYLVANIA, School Laws of 1905.**

CIV. A high school maintaining four years of study beyond the branches of learning prescribed to be taught in the common schools and called the common branches shall be known as a high school of the first grade; a high school maintaining three years of study beyond the common branches shall be known as a high school of the second grade; a high school maintaining two years of study beyond the common branches shall be known as a high school of the third grade: Provided, That the reviews necessary for the

prosecution of high school studies shall not be excluded from the estimate of the year's study beyond the common branches (z).

CV. From the annual appropriations in aid of high schools, a high school of the first grade shall each year receive a sum not exceeding eight hundred dollars, a high school of the second grade a sum not exceeding six hundred dollars, a high school of the third grade a sum not exceeding four hundred dollars. If the appropriation is insufficient to pay the above amount to the several high schools, then the appropriation shall be distributed to the schools of the respective grades in such a manner that each school shall receive a sum proportional to the number of years of advanced study maintained in its course of instruction: Provided, That any high school established at the fall opening of the school year, beginning on the first Monday of June, one thousand eight hundred and ninety-five, shall be paid at the end of the year as a high school of the third grade (a).

WISCONSIN, School Laws of 1907.

*Free High Schools—State Aid may be withheld—* (Chapter 527, Laws of 1907, amending section 496, Statutes of 1898, as amended by chapter 345, laws of 1901, and chapter 214, Laws of 1899.) *Section 496.* 1. Any free high school district which shall have established a free high school according to the provisions of these statutes, and shall have maintained the same for not less than eight months in any school year, shall be entitled to receive from the general fund of the state annually one half of the amount actually expended for instruction in its high school during such year over and above the amount required by law to be expended for common school purposes, but not to exceed in one year five hundred dollars to one district; provided, this limitation shall not apply to town free high schools.

2. To obtain such aid the high school board, or in cities not under a county superintendent, the president and secretary of the board of education and the treasurer, shall on or before the first day of August, report in duplicate to the state superintendent, under their oaths, the amount actually expended for instruction during the previous school year, specifying the several items thereof, with the date and object of each fully. Thereupon said superintendent shall fix the amount to be paid such district and certify the same to the secretary of state with one of such reports annexed; provided, that the state superintendent may withhold such state aid from any free high school district in which the scope and character of the work are not maintained in such manner as to meet his approval or in which the high school building, the outhouses and grounds, or the furniture and equipment are not maintained in good condition and kept clean and free from any unsanitary features; or in which the high school is not provided with sufficient equipment, including globes, maps, blackboards, library, scientific apparatus, and other essentials for the proper work

of the school or for failure to comply with any of the provisions of the free high school law. He may order and direct that an amount equal to the whole or part of such state aid for any year shall be expended in the purchase of proper equipment, and in case of failure of the district to comply with such direction he shall withhold from the aid to that district an amount equal to the sum ordered to be expended. On such certificate, at any time after the first day of December, the certified amount shall be paid to the district treasurer out of the state treasury.

3. The secretary of state shall annually include and apportion in the state tax all such sums as shall have been paid. Whenever, owing to any failure or neglect to make the report required by law, any free high school shall fail to have apportioned to it, its share of the state aid, the state superintendent may, after the time hereinbefore fixed for such apportionment by him, fix an amount ten per centum less than the amount which said school would have been entitled to, had it complied with the provisions of this section, and certify the same to the secretary of state with the report of such district annexed thereto, and the secretary of state shall thereupon draw his warrant for such amount or amounts in favor of such district.

4. The whole amount annually paid under the provisions of this section shall not exceed seventy-five thousand dollars, and if more be demanded by such districts they shall be paid proportionally; provided, that if the whole amount authorized to be paid annually in aid of free high schools as provided by section 491b as amended by this act, is not demanded or expended under the provisions of that section, then the unexpended balance of the amount therein annually authorized to be paid in aid of such schools may be added to and apportioned among the free high schools provided for in sections 490 and 491.

**NORTH DAKOTA, School Laws of 1903, Article 23. High School Board.**

Sec. 867. The governor, superintendent of public instruction, and president of the state university are hereby constituted a board of commissioners on preparatory schools for the encouragement of higher education in the state. Said board shall be called the "High School Board," and shall perform the duties and have and exercise the powers hereinafter mentioned.

Sec. 868. Any public graded school in any city or incorporated village or township, organized into a district, under the township or district system, which shall give instruction according to the terms and provisions of this article and shall admit students of either sex from any part of the state without charge for tuition, shall be entitled to be classified as a state high school and to receive pecuniary aid as hereinafter specified; provided, however, that no such school shall be required to admit non-resident pupils unless they pass an examination in orthography, reading in English, penmanship, arithmetic, grammar, modern geography, and the history of the United States.

**Sec. 869.** The said board shall require of the schools applying for such pecuniary aid or prerequisite to receiving such aid, compliance with the following conditions, to wit:—

1. That there be regular and orderly courses of study, embracing all the branches prescribed by the said board for the first two years of the high school course.

2. That the said school receiving pecuniary aid under this article shall at all times permit the said board of commissioners, or any of them, to visit and examine the classes pursuing the said preparatory courses.

**Sec. 870. (Amended.)** 1. The high school board shall cause each school receiving aid under this act to be visited at least once each year by a committee of one or more members, who shall carefully inspect the instruction and discipline of the preparatory classes, and make a written report on the same immediately; provided, that no money shall be paid in any case until after such report shall have been received and examined by the board, and the work of the school approved by a vote of the board.

2. The said board shall receive applications from such schools for aid as hereinafter provided, which applications shall be received and acted upon in the order of their reception. The said board shall apportion to each of said schools which shall have fully complied with the provisions of this act and whose application shall have been approved by the board, the following sums, to wit: Four hundred dollars (\$400) each year to each school maintaining four years' high school course and doing four years' high school work; the sum of three hundred dollars (\$300) each year to each school having a three years' high school course and doing three years' high school work; the sum of two hundred dollars (\$200) each year to each school having a two years' high school course and doing two years' high school work; provided, that moneys so apportioned to any high school shall be used to increase the efficiency of the high school work; provided, further, that the total amount of the apportionment and expenses under this act shall not exceed ten thousand dollars (\$10,000) in one year. The sum of ten thousand dollars (\$10,000) is hereby appropriated annually for the purpose of this act, to be paid out of any moneys in the treasury not otherwise appropriated; which amount, or so much thereof as may be necessary, shall be paid upon the itemized vouchers of said board, duly certified and filed with the state auditor; provided, however, that in case the amount appropriated and available under this act for the payment of aid to such schools shall in any year be insufficient to apportion each of such high schools as are entitled thereto the full amount intended to be apportioned to the high schools of the various classes, then in such case such amount as is apportioned and available shall be apportioned pro rata among all the schools entitled thereto.

## APPENDIX H

### SOME DAILY PROGRAMS IN ACTUAL USE

I. Streator, Ill., Township High School, daily program for the first semester, 1908-1909. This is a school enrolling 285 pupils and employing a principal and eleven teachers. The special points presented by this program are: breadth of curriculum, arrangement of sciences for laboratory work, provision for care of the library. The segregation in Latin I is also interesting. Time is taken after school for consultations, athletic training, etc. The Roman numerals with the subjects indicate the year in which the subject is taken.

See Table on page 350.

II. Schedule of Recitation of the Deerfield Township High School, Highland Park, Ill., 1908-1909. This high school enrolls 227 pupils, with a principal and ten regular teachers. This shows two sessions, with a luncheon period of thirty minutes and a music period, twice a week, of ten minutes. The arrangements for manual training, gymnasium practice, and laboratory periods are also of interest.

See Table on page 351.

III. Daily program of the Hinsdale, Ill., High School, first semester, 1908-1909. This is a suburban village school enrolling 102 pupils, with a principal and five other teachers and a superintendent who teaches one high school class. As will be seen, this is a one-session high school. Attention is called to the arrangement of the sciences so as to give double periods for laboratory work; also to the manual arts and domestic science arrangement.

See Table on page 352.

IV. Following is the program in use at Galva, Ill., a high school which is part of the school system of a large town. The high school enrolls 84 pupils and employs a principal and three other regular teachers. The superintendent also teaches two classes. This program is given to show the comparative breadth of work undertaken and the consequent difficulties in adjusting the program. The period for study and consultation is also a feature.

See Table on page 353.

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## OPENING EXERCISES 8:30-8:45

Period	Time	Mr. Upton Principal	Mrs. Strite	Miss Chalfant	Miss Robins	Miss Shay	Miss White	Miss Stark	Miss Lukins	Mr. Fletcher	Mr. Bullock	Mr. Dinecott	Mr. Locke
I	8:45-9:30		II Geometry	II Latin Caesar	I History (English)	I English	Hall	II German	I Algebra	I Library	I Book-keeping	IV Chemistry	I Physiology
II	9:30-10:15		I Arithmetic	II Latin Caesar	I History (English)	Library	II Stenography	I German	I Algebra	IV English	Hall	IV Chemistry	I Physiology
III	10:15-11:00	Civics and U.S. History	III Geometry	I Latin Boys	II History Ancient	I English Semester	I English	I German	I Algebra	III English	I Arithmetic	I Arithmetic	Hall
IV	11:00-11:45		II Geometry Semester	Library	I Algebra Semester	III English	II English	I German Semester	I Algebra	IV English	II Book-keeping	Hall	I Physiology
RECESS 11:45-1:00													
V	1:00-1:45		IV Arithmetic	IV Latin Semester	III History Med. and Mod.	I English	Type-writing	III French	Dom. Science	Hall	Man. Training	Physics	Biology
VI	1:45-2:30			I Latin Girls	I History (English)	Hall	Drawing	Library		II English	Man. Training	Physics	Biology
VII	2:30-3:15	Civics and U.S. History	II Geometry	III-IV Latin Cicero Virgil	Hall	I English	Drawing	III-IV German	Dom. Science	II English	Man. Training	Physics	Biology

Hour	Room 16 Miss Stuart	Room 15 Miss Martin	Room 5 Mr. Smith	Room 14 Miss Bliss	Room 9 Miss Moser	Room 34 Mr. Hill	Room 17 Miss Eustis	Room 8 A. R. Williams	F. B. Williams Mach. Shop Forge Mech. Drawing Room 17	Room 21 Miss White	Room 5 R. L. Sandwick
9:00	Latin I	Eng. I		Ger. II	Algebra	Hall		Com. Arith.		Domestic Science	Eng. III Room 5
9:47½	Cicero	Hall	Algebra		Geom.	Eng. II	Girls Gym. M. W. F.	Com. Arith.		Physiol. Room 13	
10:35	GENERAL ASSEMBLY. MUSIC, Tuesday and Friday, DUDLEY SMITH, Director										
10:45		Eng. IV	Algebra	Hall	Algebra II		Draw. I	Gym. M. W. F. Pen'ship T. Th.		Biology	
11:32½	Hall	Eng. III	Room 13 Phys. Geog.	French III	Geom.	American History	Draw. II	Gym. M. W. F. Pen'ship T. Th.	Shop I	T. Th. Biology W. F. Sewing	Political Economy
12:12½	LUNCHEON										
12:42½	Latin II	Eng. I	Physics	French I	Algebra	Eng. II	Art	Stenog.	Shop I	Hall	
1:27½	Virgil	Eng. I	Phys. Lab. T. Th. P. G. Lab. M. W.	French II		Ancient History	Draw. I	B. Keep.	Hall	Physiol. Room 13	
[ 2:12½	Latin I		Phys. Geo. Recit. Room 13	Ger. I	Hall	Med. and Modern History	Gym. M. W. F.	Com. Law	Forge	Dom. Science T. W.	
Evening Study Period	Hall T.	Hall F.			Hall W.		Hall Th.			Hall M.	
Morning Study Period			Hall F.			Hall Th.		Hall W.	Hall T.		Hall M.

PERIOD	HOUR	MISS WHITMORE	MISS SEDGWICK	MR. COOPER	MR. MANLEY	MISS SPENCE	MR. SNYDER	MR. GILES
1	8:27-9:10	Latin II		Physiography	Geometry I (a)			English IV
2	9:10-9:53	German II	English I (a)	Physiography	Geometry I (b)			
3	9:53-10:35	Latin III	English History	Physics	Algebra I (b)			
4	10:35-11:17	Latin I (b)	English II	Physics	Solid Geometry			
5	11:17-12	Latin I (a)	History I	Chemistry	U. S. History	Dom. Sci. 1:30-3:30 M. Th. 2:10-2:50 Wed.	Woodwork: M. and Th. Metalwork: Tue. and Fri. Mech. Dr. W. 1:30-3:30	
6	12-12:40	German I	English I (b)	Chemistry	Algebra I (a)	Dom. Art. 1:30-3:30 Tu. Wed. Fri. 1:30-2:10 Wed.		

STREETER	WHITE	EDWARDS	AVERY	GOULD	MOHLER
9:00	Music Mon. Tu. 30 min.	Current Events Wed. 15 min. 20 min.	Spelling Thur. 20 min.	—	—
9:50	—	—	Latin III English IV English III	Zoölogy II " Lab. M. T. W.	Algebra I <sup>a</sup> —
10:35	—	—	—	Physics III " Lab.	Algebra I <sup>b</sup> Algebra II
11:20	—	U.S. Hist. and Civil Govt. IV Tues.	—	W. Th. F.	—
12:00	—	U.S. Hist. and Civil Govt. IV M. W. Th. F.	—	—	—
1:15	—	Geometry III	English II	Phys. Geog. I	1:15-2:15 Man. Tr. IV M. Th.
2:00	Period for study and consultation with teachers				2-3 M. 2:15-3W. 2-3 Tu. 2:15-3 Th. 3-4 Man. Tr. III Tu. F.
2:15	—	—	Latin IV History III	Chemistry IV	Man. Tr. II and I <sup>a</sup> Man. Tr. I <sup>b</sup>
3:00	—	History II	English I	Laboratory Chemistry 3 days per week	—
3:45	—	—	—	—	—

V. The following is the program in use at Camp Point, Ill. It is a typical three-teacher program, of whom the superintendent is one. The school enrolls 60 pupils. Attention is called to the ways in which time is economized. On days when physiography is given only a single period, the teacher directs the musical training of the grades. The physiography is followed the second semester by botany, and these two are taught alternate years, to two classes. The subjects alternating with these are zoölogy and physiology, each a half-year. Civics is taught with the American history.

It will be observed that no teacher has more than six periods of teaching.

	SIMPSON	ALLEN	ROATH
9:00- 9:10	Exercises		
9:10- 9:50		American Hist. III	Latin II
9:50-10:30	Geometry IV		Latin I
10:30-10:40	Recess		
10:40-11:20	Geometry III	English IV	
11:20-12:00	Algebra II	Music (in grades)	English I
1:10- 1:50	(On alternate days)	Physiography II	Latin III
1:50- 2:30	Algebra I	Physiography II	Latin IV
2:30- 2:40	Recess		
2:40- 3:20	Physics } From	Eng. Hist. and Hist. of	
	3:00 to	Eng. Lit. III	
3:20- 4:00	Physics } 4:00	Ancient Hist. I	English II

I, II, III, IV, indicate the year of the course.

VI. Daily program of the Paw Paw, Ill., High School. This is a typical small town high school in which the superintendent and one assistant carry all the work of a four-year high school course. In this case third- and fourth-year English alternate; also physics and biology.

Hour	MR. A. A. FRANZKE	MR. F. J. SNAPP	Time
9:00	Chapel	Exercises	10
9:10	German First Year	Economics	40
9:50	German Second Year	Economics	45
10:35	Recess	Period	10
10:45	English First Year	Physics	40
11:25	Rhetoric	Physics (Lab.) and Visiting	40
12:05	Intermission	— Noon	70
1:15	Ancient History	Algebra Second Year	45
2:00	American Literature	Algebra First Year	45
2:45	Recess	Period	15
3:00			
to	M. and M. History	Plane-Solid Geometry	40
3:40			

VII. High school daily program of the John Swaney Consolidated School, Putnam Co., Ill., P. O. McNabb.

This is a four-year two-teacher high school, and the program here given is for the first semester, 1908-1909.

HOOR	ASSISTANT PRINCIPAL	PRINCIPAL
9 - 9:10	Opening	Exercises
9:10- 9:50	First-year Algebra	Chemistry
9:50-10:30	Ancient History	Chemistry
10:30-11:10	Second-year Algebra	English III
11:10-11:50	English History	English II
11:50-12:50	Luncheon	
12:50- 1:30	Second-year Latin	Drawing (W.)
1:30- 2:10	Plane Geometry	English I
2:10- 2:50	Household Science II	{ M. T. W. Th. { Fr. { Animal Husbandry { Man. Tr.
2:50- 3:30	Physiology	{ M. T. W. Th. { Fr. { Animal Husbandry { Man. Tr.

In the second semester second-year Algebra drops out, leaving room for another period of Household Science II. This is then given on M. T. W. and Th., and Household Science I on Fr. Physiography takes the place of Physiology. Drawing is dropped, and Agronomy II takes the place of Animal Husbandry.

Alternation is also employed for economy of time. In the program for the following year would therefore appear English IV, Physics, Latin I and III, American History and Civics, Horticulture, Arithmetic and Bookkeeping, Household Science III, Zoölogy and Botany.

This program is given as illustrating one way of arranging a general high school course for presentation to a small group of pupils in a rural district.

This high school is well equipped with modern facilities and conveniences, including good laboratories and a workshop.

## APPENDIX I—TABLE SHOWING PRINCIPAL LEGAL

STATE	CONDITION FOR ESTABLISHING	KINDS OF HIGH SCHOOLS	MAINTENANCE	TUITION
ALABAMA (Laws of 1908)	City and town boards may establish. County high schools established by State High School Commission.	District high schools of cities and towns. County high schools.	City councils appropriate on estimates of boards of education. In case of county high school site and building donated. \$2000 annually appropriated from treasury for teaching.	No provision. County schools make tuition unnecessary.
ARIZONA (Laws of 1905)	In districts of 1000 or more inhabitants by vote of electors.	District and union district.	By special tax levy estimated and certified by county superintendent.	A "reasonable" tuition fee collected from non-residents of high school districts.
ARKANSAS (Laws of 1907)	Establishment mandatory upon city and town boards.	City and town district.	Out of regular funds provided by taxation and distributable funds.	All schools are free.
CALIFORNIA (Laws of 1907)	By vote of electors in districts with minimum school population of 200.	City or district high schools. Union high school districts. County high schools.	By special tax levy. State high school fund, $\frac{1}{3}$ apportioned irrespective of attendance; rest pro rata.	Board may require amount of cost per pupil less amount per pupil received from state.
COLORADO (Laws of 1907)	Boards of education authorized to establish.	District high schools, 1st and 2d class; union high schools; county high schools, 1st and 2d class.	District by local tax. County by special tax over county not to exceed 2 mills on a dollar.	Board determines for non-residents.

## ENACTMENTS AFFECTING HIGH SCHOOLS, BY STATES

TEXT-BOOKS	CONDITIONS OF ADMISSION	SUPERVISION AND INSPECTION	TEACHERS' QUALIFICATIONS	OTHER PROVISIONS
High school texts prescribed by local boards.	In districts controlled by local boards. In county school must be graduates of elementary schools.	By local district superintendents and by county boards respectively.	In districts those licensed by local boards; in counties those holding first grade or life certificate granted by State Board of Examiners.	
Prescribed as uniform series by territorial Board of Education.	Certificate of teacher in district in which pupil resides.	General supervision by territorial board. Direct supervision by county superintendent.	No special provision.	
Adopted by boards from list prepared by state superintendent.	Determined by local boards.	Direct by principal or superintendent of district. General by county and state superintendents.	No special qualifications required by law. Local boards may examine.	
State publishes books to be used. Use of these compulsory.	Only such pupils as have completed courses prescribed for primary and grammar schools.	No special provision. University inspects and accredits.	Special high school certificate required.	
School boards select. By vote of district may provide free text-books.	Certificate from county superintendent of graduation from 8th grade.	No special provision. University inspects and accredits.	Special certificate covering high school branches is required.	

STATE	CONDITION FOR ESTABLISHING	KINDS OF HIGH SCHOOLS	MAINTENANCE	TUITION
CONNECTICUT (Laws of 1908)	Town may establish.	Approved and those of lower rank.	Chiefly local tax. State aids in support of high-school library and laboratories.	Towns not having high schools may pay tuition at non-local school.
DELAWARE (Correct to 1906)	No special provision.		The state treasurer pays to each graded school \$15 for each year spent by a pupil in school.	
FLORIDA (Correct to 1906)	Authorizes county boards to establish when requested by patrons and when number of pupils requires it.			
GEORGIA (Correct to 1906)	No mention of high schools.			
IDAHO (Laws of 1907)	No mention of high schools.	Maintains a state academy.		
ILLINOIS (Laws of 1907)	No special provision except for township high schools. Later by vote of electors on petition.	High schools as parts of city systems, not specially authorized. Township high schools.	First as part of general system. Township schools by tax over township.	Districts not having high schools may pay on certain conditions.

TEXT-BOOKS	CONDITIONS OF ADMISSION	SUPERVISION AND INSPECTION	TEACHERS' QUALIFICATIONS	OTHER PROVISIONS
Free text-books mandatory on boards.				Transportation of pupils attending approved non - local schools must be paid by town.
Uniform state list.				The course of study is prescribed by the county board.
May be free by election.				
Adopted by district boards.	No special provision.	General by county superintendents, although not specially provided. Inspection for accrediting by state university.	No provision other than for elementary schools.	

STATE	CONDITION FOR ESTABLISHING	KINDS OF HIGH SCHOOLS	MAINTENANCE	TUITION
INDIANA (Laws of 1907)	Trustee may establish township school for twenty-five qualified pupils. District high schools are a department of graded schools.	Those departments of graded common schools, known as commissioned and non-commissioned. Township high schools, county high schools.	Township schools by tax on township. County schools by tax over county and by donations. City schools as part of graded system.	Regulated by school trustees.
IOWA (Laws of 1907)	Boards of directors have power to maintain schools of higher order.	District and county high schools.	Local taxation. County schools by tax over county not to exceed 2 mills.	Fixed by board of directors or county board of trustees.
KANSAS (Laws of 1907)	City schools organized by boards. County high schools by vote of people.	City, 1st and 2d class, and county.	Local and county tax, respectively. State aid for industrial training. County high school fund (Barnes law).	Tuition free in counties where there is county high school fund. Fixed by boards in other cases. Decision 1904 says tuition may not be charged by 2d class cities.
KENTUCKY (Laws of 1908)	Not specifically mentioned in law. Part of graded common school system.		As part of common schools.	Fixed by boards for non-residents.

TEXT-BOOKS	CONDITIONS OF ADMISSION	SUPERVISION AND INSPECTION	TEACHERS' QUALIFICATIONS	OTHER PROVISIONS
State uniformity.	Fixed by trustees.	By state Board of Education.	Superintendent of state rules that license must cover high school subjects taught.	Co'missioned high schools are defined as including not less than 4 yr. following 8 yr. of elementary school. Studies are enumerated.
District or county uniformity optional. Free texts also optional.	Determined by boards.	State Board of Examiners inspects schools designed for training of teachers. University inspects and accredits.		
State uniformity law does not include high school texts.	Determined by boards of education.	No special provision. University inspects and accredits.	City boards examine and certify.	High school fraternities disbarred.
	Part of the graded system.	That of the common schools.	No special provisions.	

STATE	CONDITION FOR ESTABLISHING	KINDS OF HIGH SCHOOLS		MAINTENANCE	TUITION
MINNESOTA (Laws of 1907)	Established by school boards.	District school.	high	Local taxation, state aid.	Tuition is free to residents of state who are qualified.
MISSISSIPPI (Laws of 1906)	Board of trustees may establish in separate school districts.	Graded schools. County schools.	high high	Out of the funds established by taxation, and the distributable funds.	May be fixed by school trustees, or schools may be made free.
MISSOURI (Laws of 1907)	Boards of directors may establish in cities or towns. Central or union high schools by vote of districts.	City or town, and central or union.		Out of general local and state funds.	Fixed by boards.
MONTANA (Correct to 1907)	School trustees determine branches to be taught in public schools. County high schools by vote on petition.	Graded schools. County schools.	high high	Out of regular public school funds. County high schools by tax on county.	Schools are free.
NEBRASKA (Laws of 1907)	District trustees may establish by order of district.	District county.	and	By district levy and distributable fund, or by county tax, in care of county high schools.	Made free by a special free high school law.
NEVADA (Laws of 1907)	Established in districts by school trustees. County high schools by vote of county.	Graded schools. County schools.	high high	By taxation and distributable funds in districts. By county tax in care of county high schools.	Tuition free.

TEXT-BOOKS	CONDITIONS OF ADMISSION	SUPERVISION AND INSPECTION	TEACHERS' QUALIFICATIONS	OTHER PROVISIONS
Free texts may be provided — subject to vote of district.	Determined by definition of school.	By state High School Board through inspector appointed by that body.	Not specified in law.	High schools defined.
High school texts not included in uniform list, provided by law for the state.	Determined by school trustees.	By trustees and county superintendent.	Not specified.	
High schools affiliated with university may select, through their boards.	Determined by boards in cities and towns. Fixed by law for central or union schools.	By state superintendent for purpose of classifying. Also inspected and accredited by university.	Those of central high schools must hold first-grade county certificate or a state certificate.	
Uniform series adopted for state. Books may be free at option of electors.	By gradation. In county schools by rules of board.	By district and county superintendents and boards.	County or state certification.	
Purchased by districts and loaned free. Mandatory.	Determined by trustees or boards of education.	By district, county, and state superintendents. Inspected for accrediting by university.	Graduate of university or normal school or holder of professional state certificate.	High school course provided for. High school defined.
Adopted by boards.	By gradation in districts. By county board and principal in county school.	By district superintendents and principals.	High school certificate.	

STATE	CONDITION FOR ESTABLISHING	KINDS OF HIGH SCHOOLS	MAINTENANCE	TUITION
NEW HAMPSHIRE (Correct to 1907)	By vote of any district.	Partially or fully approved.	By local tax and by tuition for non-residents paid by state.	Paid by state.
NEW JERSEY (Laws of 1905)	By local boards as part of graded system.	District and union district.	Local tax.	Fixed by boards. May be paid by district of non-resident when so ordered by vote of people.
NEW MEXICO (Laws of 1907)	Established by city boards at their own discretion.	Graded.	As part of public school system.	Determined by local boards.
NEW YORK (Correct to 1907)	Academic departments established at discretion of boards of education.	High schools known as academic departments of public schools.	Local tax and state aid.	State pays tuition of non-resident pupils.
NORTH CAROLINA (Laws of 1907)	High school subjects may be taught in schools of more than one teacher. Not to interfere with thorough elementary work. Township schools may be established.	As part of common schools. Township high schools.	Local tax and distributable fund.	
NORTH DAKOTA (Laws of 1907)	Established by boards of education.	Two, three, and four-year schools.	Local tax and state aid.	Free.

TEXT-BOOKS	CONDITIONS OF ADMISSION	SUPERVISION AND INSPECTION	TEACHERS' QUALIFICATIONS	OTHER PROVISIONS
Free text-books, mandatory.	Determined by boards.	Schools are approved by superintendent of public instruction.	Certification by local boards.	High school defined.
Free text-books, mandatory.	Determined by local boards.	Inspected by state inspector under state Board of Education.	Not specified.	Defined as a school having the "third four years of the course."
Adopted by territorial Board of Education.	By gradation.	No special provision.	No special provisions.	
Adopted and designated by local boards. May be made free.	Fixed by the Regents of the University of New York of which academic departments are apart.	By the state Commissioner of Education.	Must have minimum of professional training.	State aid to provide for teachers' training classes.
Free or sold at cost, at discretion of boards.	Determined by boards, and under rules of state board.	By state high school board, or by inspector appointed by that body.	Not specified in law.	

STATE	CONDITION FOR ESTABLISHING	KINDS OF HIGH SCHOOLS	MAINTENANCE	TUITION
OHIO (Correct to 1906)	Board of education may establish when deemed proper or necessary.	District, township, union, or special district high schools. Classified into 1st, 2d, and 3d grades.	District high schools from local tax and state school funds. Township or union by special tax in addition to tuition fund.	Determined by boards.
OKLAHOMA (Laws of 1908)	Boards of education of cities of the first class may establish. On petition of $\frac{1}{3}$ of electors, counties may vote for establishment of county school.	City high schools. County high schools.	By local tax and distributable funds in cities. By county tax in case of county schools.	May be charged to non-residents by boards.
OREGON (Laws of 1907)	Established in districts on vote of electors. Established in counties where a majority favor a county school. By union of districts.	District, county, and union district high schools.	By local tax and distributable funds.	Fixed by boards in districts. County high schools free to those in county.
PENNSYLVANIA (Laws of 1907)	Boards of education may establish. Directors of two or more townships or school districts may establish joint high schools.	District and joint high schools. Also schools of 1st, 2d, and 3d grades.	District tax and state aid.	Paid by districts, except that amount of state aid is deducted.
RHODE ISLAND (Correct to 1906)	Established by cities and towns.	Town or district high schools.	Local tax and state aid to the amount of \$20 per pupil.	Paid by state.

TEXT-BOOKS	CONDITIONS OF ADMISSION	SUPERVISION AND INSPECTION	TEACHERS' QUALIFICATIONS	OTHER PROVISIONS
Adopted by boards from lists and prices on file in state commissioner's office.	Determined by definition.	By state commissioner for classification. Inspected for accrediting by university.	Teacher's high school certificate required.	
Uniform series adopted by Text-book Commission.	Determined by boards.	By city superintendents and by principals of county schools.	A general state certificate or a state high school certificate is required.	County high schools provide normal courses, graduation from which entitles to teach.
Selected by state Text-book Commission.	Must pass uniform 8th grade examination.	By city and county superintendents and by principals of county schools.	Graduates of normal school, collegiate institution, or hold state certificate or diploma.	Two years of course prescribed by state superintendent. Other two years optional, by county or district boards.
Free text-books, mandatory. Districts paying tuition also pay cost of texts used by non-residents.	By examination.	By the superintendent of city, borough, or county in which located.	Must be certified for branches to be taught.	
	Determined by local school committees.	By the town superintendent.	Determined by state Board of Education.	Transportation of pupils may be provided.

STATE	CONDITION FOR ESTABLISHING	KINDS OF HIGH SCHOOLS	MAINTENANCE	TUITION
SOUTH CAROLINA (Laws of 1907)	May be established by election by any county, township, aggregation of townships, union of districts, or incorporated town or city.	Four-year, three-year, and two-year high schools.	Local tax and state aid.	
SOUTH DAKOTA (Correct to 1907)	In districts may be established at discretion of boards. Township high schools on petition and election.	District and township.	Local tax and distributable fund.	Shall be paid by home district.
TENNESSEE (Correct to 1907)	Local boards of municipalities may establish. County high schools by county court on discretion.	County high schools and high schools of municipal corporations.	By local and county tax respectively.	
TEXAS (Laws of 1907)	Not specifically mentioned in law. Schools may teach such branches as trustees may agree upon or state superintendent direct.			
UTAH (Laws of 1907)	In districts of 1000 or more population trustees may establish on vote of property tax-payers. Union high school districts established on vote.	District and union district high schools.	Local tax and distributable funds.	Schools are free except in certain cases where funds are not sufficient.

TEXT-BOOKS	CONDITIONS OF ADMISSION	SUPERVISION AND INSPECTION	TEACHERS' QUALIFICATIONS	OTHER PROVISIONS
Series prescribed by state Board of Education.	Pupils must have completed state common school course or its equivalent.	State high school board and high school inspector.	Must hold first-grade certificates. (Rule of state board.)	
County uniformity—adoptions by county boards of education. <i>May be made free.</i> <i>Free</i>	Must be graduates of 8th grade or equivalent.	By state superintendent and local superintendents. Inspected by state superintendent. <i>H. S. inspector</i>	State certificate or life diploma required.	
Uniform state adoption by state Board of Education.	On diplomas from "secondary" schools.	Local authorities. County high schools by county superintendent.	No specification except that county superintendent makes rules in case of county high schools.	Grades six to eight inclusively are designated secondary schools.
Not free in case of high schools. Selected by local boards.	Regular graduation. Must be eighteen years old.	Local and county supervision.	No special provision in case of high schools.	

STATE	CONDITION FOR ESTABLISHING	KINDS OF HIGH SCHOOLS	MAINTENANCE	TUITION
VERMONT (Laws of 1907)	Towns must maintain or provide higher instruction to qualified pupils.	High schools and academies, 1st, 2d, 3d, and 4th class.	Local tax and state aid.	Paid by towns not having high schools of first class.
VIRGINIA (Laws of 1907)	Any county or district board may establish, subject to rules of state Board of Education.	District and county.	Local tax or tuition fee, and state aid.	May be charged to all pupils. Schools receiving state aid open on equal terms to all.
WASHINGTON (Laws of 1907)	Made a part of common schools.	District and union high schools.	Made mandatory. Local tax and distributable funds. Bonus by state to union districts.	Free.
WEST VIRGINIA (Laws of 1908)	District high schools by vote at option of board.	District high schools. Joint high schools.	Local taxation and distributable funds.	As fixed by boards of education.
WISCONSIN (Laws of 1907)	Any town, village, or city having at least 25 persons prepared for work may establish.	Free high schools, joint district high schools, county schools of agricultural and domestic economy.	Local tax and state aid to certified schools equal to one half of actual expenditure by district. Total aid limited to \$25,000 for the state.	Tuition collected from home districts of pupils.
WYOMING (Correct to 1906)	Provides for free high school districts.		Local tax and distributable funds.	

TEXT-BOOKS	CONDITIONS OF ADMISSION	SUPERVISION AND INSPECTION	TEACHERS' QUALIFICATIONS	OTHER PROVISIONS
Free text-books.	By gradation in their own towns. By examination for non-residents.	Superintendent of education and town superintendents.	No special provision.	High schools are defined.
Selected by state Board of Education.	Prescribed by state Board of Education.	By division and county superintendents, and by state board.	Examined on branches to be taught. Graduates of colleges and universities of approved standing are exempt.	Consolidation and transportation provided for.
Selected by a school book commission for districts of the first class. May be made free.	By gradation.	By state board of higher education, through the inspector for the state.	No special provision.	
Uniform by counties. May be made free.	By gradation.	By Board of Education and local superintendent.	High school teacher's certificate required.	High school is defined. State board provides course of study.
May be made free.	Completion of state course for elementary schools.	By state superintendent through regular inspector. University also inspects for accrediting.	Principal must be graduate of some university, college, or normal school, or hold a state certificate or pass examination in studies taught.	Legalized manual training schools with state aid. Twelve weeks' instruction in pedagogy in free schools.
Must be made free.				



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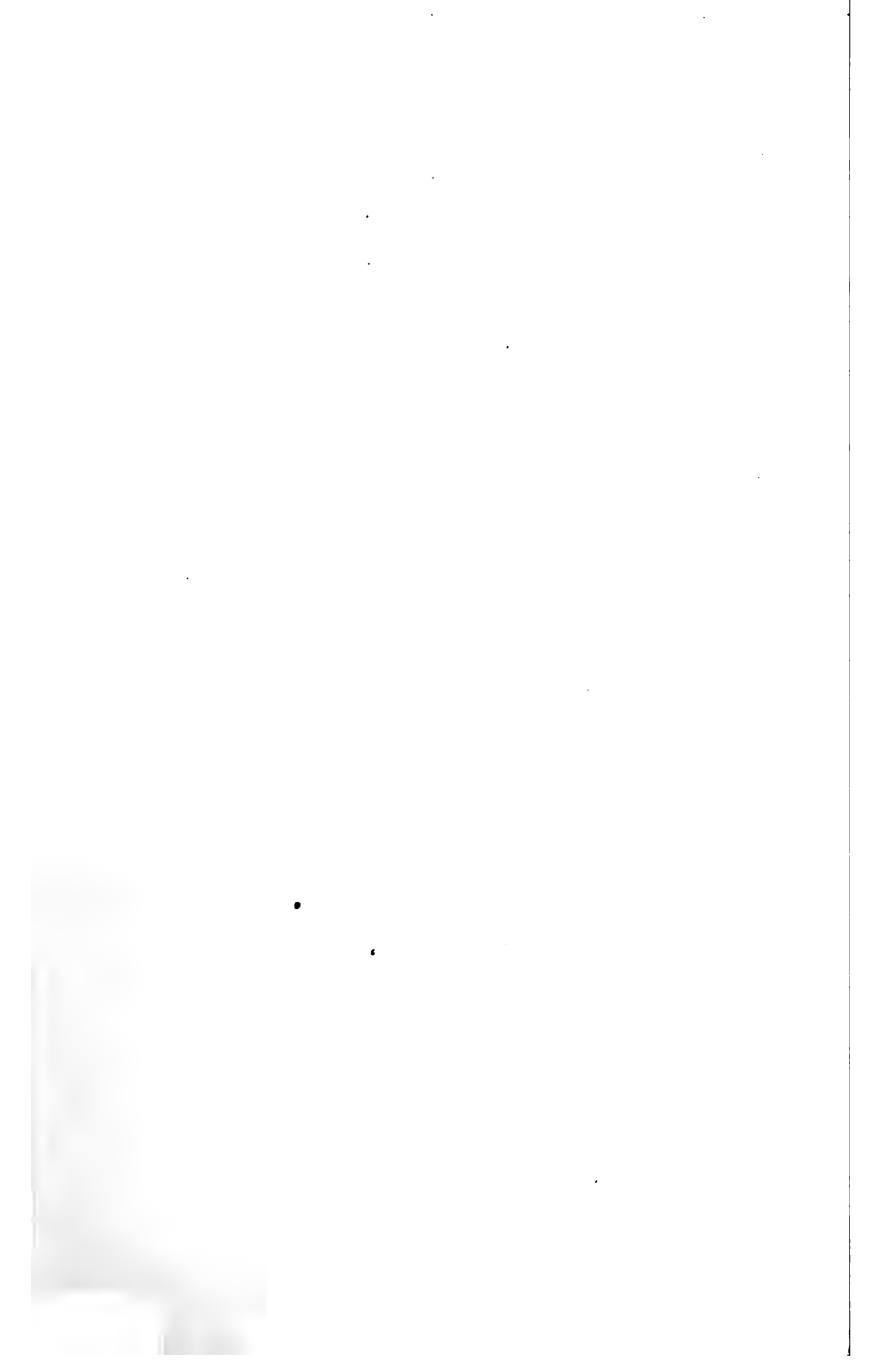
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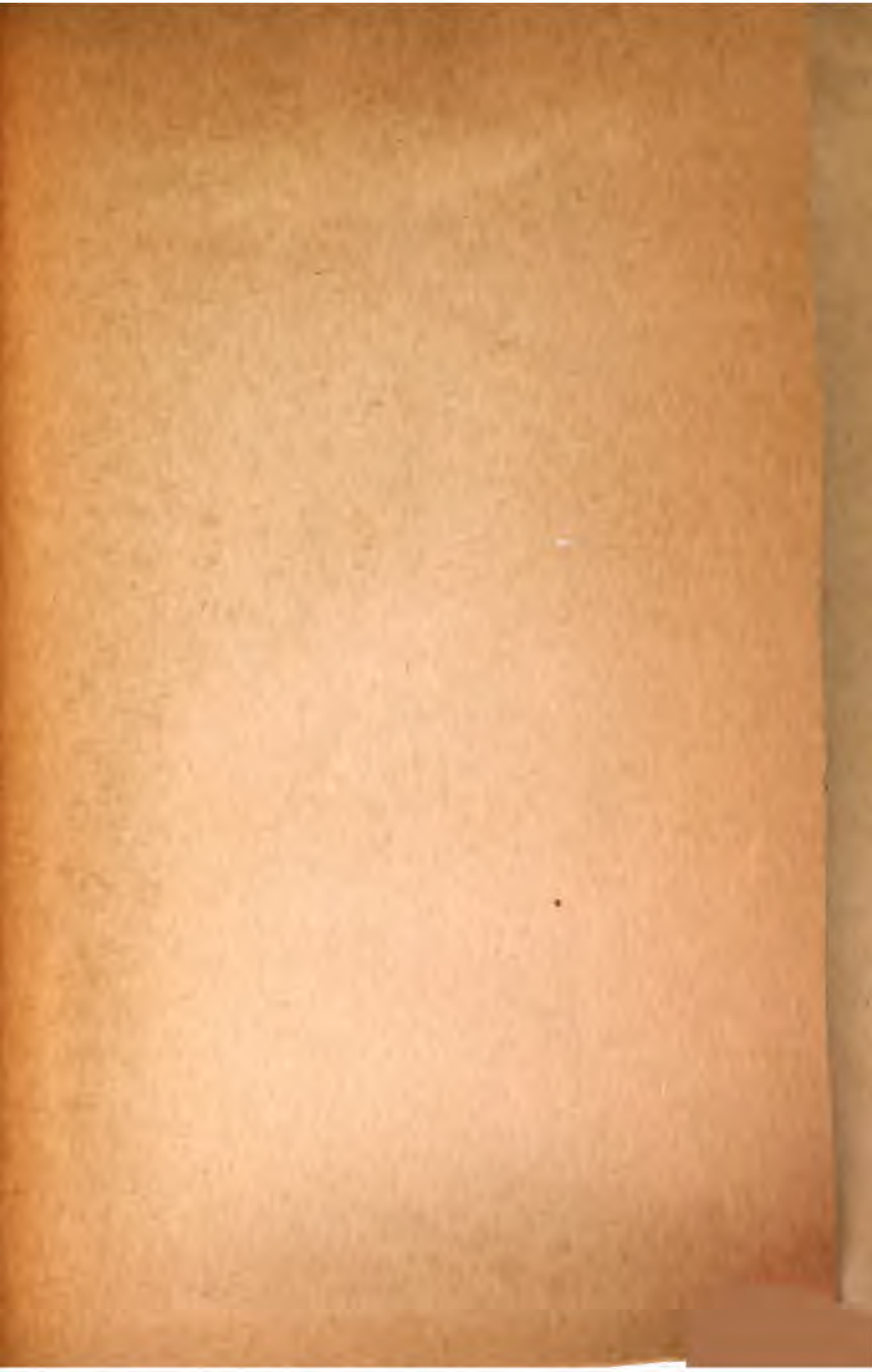
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